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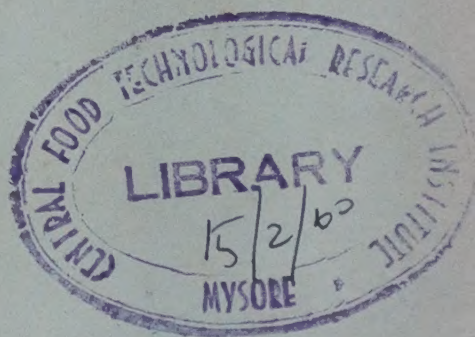


GOVERNMENT OF INDIA

THE PATENT OFFICE

PATENT OFFICE JOURNAL

1956



*(Containing matters relating to Patents and Designs for
the years 1952 to 1955.)*



PRINTED IN INDIA, BY THE MANAGER, GOVERNMENT OF INDIA PRESS, CALCUTTA,
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CONTENTS.

PART.	SUBJECT.	PAGE.
	Introductory Note	(v)
	Notices of the Patent Office	(vii—x)
I.	Chronological List of applications for patents made during 1952, 1953 and 1954	1—427
II.	Subject-matter Index in respect of applications for patents made during 1952, 1953 and 1954	429—579
III.	List of special proceedings (Patents) during 1954 and 1955—	
	(A) Void applications	581—582
	(B) Abandoned applications	583
	(C) Oppositions	583—587
	(D) Amendment	587—589
	(E) Restoration of lapsed Patents	590
	(F) Appeals to the Central Government	590
	(G) Appeals to the High Court	590
	(H) Extension of term of Patents	590—592
	(I) Applications for licences under Section 22	592
	(J) Correction of clerical errors	592
	(K) Surrender of Patents	592
	(L) Alteration of dates of applications for Patents	593—597
	(M) Entries of assignments, etc., in Register of Patents	597—602
IV.	Patents in force to 31st December, 1955	603—624
V.	Designs registered during 1954 and 1955	625—663
VI.	List of Special proceedings (Designs) during 1954 and 1955—	
	(A) Extension of Copyright in Designs	665—668
	(B) Registration of Assignments etc.	668
	(C) Cancellation of the Registration of Designs	669
	(D) Correction of clerical errors	669
VII.	Name Index of applicants in respect of applications for Patents made during 1952, 1953 and 1954	671—713
VIII.	Name Index of applicants in respect of Designs registered during 1954 and 1955	715—722

NOTE.—The Patent Office does not guarantee the accuracy of its publications of undertake any responsibility for errors or omissions or their consequences.

INTRODUCTORY NOTE.

This volume contains as much materials as have been possible to incorporate and deals mainly with applications for the grant of patents made during the year 1952, 1953 and 1954, and designs registered during the years 1954 and 1955, under the Indian Patents and Designs Act, 1911 (II of 1911), and forms a continuation of the consolidated volumes for 1900-1911 and 1912-1920 and of the Journals issued for the periods 1921 to 1955. The lists of special proceedings in respect of patents and designs included in this volume cover the period 1954 and 1955.

A list of the patents in force on the 31st December, 1955, is given in Part IV of this volume.

Pending the next issue of this Journal, the Weekly Notifications of the Patent Office published in the Gazette of India, Part III, Section 2, should be consulted.

H. N. GHOSH,
Controller of Patents and Designs.

NOTICES OF THE PATENT OFFICE

1. *Patent Office: Address and Communications.*—The Patent Office which administers the Indian Patents and Designs Act and grants patents thereunder is situated at 214, Lower Circular Road, Calcutta-17. It has no branches anywhere. The Office is in charge of the Controller of Patents and Designs. All communications intended for the Patent Office should be addressed to the Controller of Patents and Designs.

2. *Office hours.*—The Office and the Public Room attached to it are open to the public from 10 A.M. to 5 P.M. on week days and from 10 A.M. to 1-30 P.M. on Saturdays. On Sundays and Government holidays the office remains closed to the public.

3. *Existing Law and Instructions.*—The existing law governing the grant of patents and registration of designs in India, and detailed instructions for the preparation of the specifications and drawings and other directions for the guidance of inventors and others are given in the PATENT OFFICE HANDBOOK, Ninth Edition.

A booklet entitled "GENERAL INFORMATION FOR APPLICANTS FOR PATENTS" containing instructions for inventors for making applications for patents for their inventions has been issued.

As the value of patents depends largely upon the skilful preparation of the specification and claims, applicants for patents are, in their own interest, advised to consult the Handbook or the above booklet before an application is made to the Controller.

A similar booklet entitled "A GUIDE FOR APPLICANTS FOR THE REGISTRATION OF DESIGNS", containing necessary instructions for registration of designs has also been issued.

Copies of the above two booklets may be obtained free on application to the Controller of Patents and Designs.

4. *Sale of Publications.*—The Patent Office Handbook, Ninth Edition (Price Rs. 3.50 per copy) is on sale with the Manager of Publications, Civil Lines, Delhi.

Printed specifications of inventions bearing the numbers 1 to 45,000 are sold by the Patent Office. Printed Specifications from No. 45,001 onwards are stocked by the Incharge, Government of

India Book Depot, 8, Hastings Street, Calcutta-1, and copies thereof may be obtained from him either on cash payment or by mail order. Specifications from No. 45,001 onwards, the publication of which was notified in the Gazette of India, Part III, Section 2, prior to 3rd November, 1956, may also be obtained from the Manager of Publications, Civil Lines, Delhi.

Other publications of the Patent Office are on sale at the Office of the Manager of Publications, Civil Lines, Delhi. Copies of the said publications are also available at the Government of India Book Depot, 8, Hastings Street, Calcutta-1, for local sale on cash payment only at the counter of the Depot.

5. *Inspection Centres.*—The printed specifications of inventions and other publications of the Patent Office have been deposited for the inspection of the public **FREE OF CHARGE** at the following places:—

ALLAHABAD	The Director. Sheila Dhar Institute of Soil Science, University of Allahabad, 2-D, Beli Road, Allahabad, U.P.
ANNAMALAINAGAR	The Librarian. Annamalai University Library, Annamalaiagar, P. O. South Arcot Dist., Madras.
BANGALORE	The Director, Indian Institute of Science, Bangalore, Mysore.
BARODA	The Assistant Director of Industries, Baroda Region, Old Kothi Building, Baroda, Bombay.
BHAVNAGAR	The Director. Central Salt Research Institute, Bhavnagar, Saurashtra.
BOMBAY	{ The Registrar of Trade Marks, New Marine Lines, Bombay.
	{ The Director, Department of Chemical Technology, Matunga, Bombay.
CALCUTTA	{ The Controller of Patents and Designs, The Patent Office, 214, Lower Circular Road, Calcutta-17.
	{ The Director, Central Glass and Ceramic Research Institute, Jadavpur, Calcutta-32.

CALCUTTA	The Secretary, Councils of the University Colleges of Science and Technology, 92, Upper Circular Road, Calcutta-9.
COONOR	The Director, Nutrition Research Laboratories, Indian Council of Medical Research, Coonoor, Madras.
CUTTACK	The Librarian, Kanika Library, Ravenshaw College, Cuttack-3, Orissa.
DEHRA DUN	The President, Forest Research Institute & Colleges, Dehra Dun, U.P.
DELHI	The Director, Council of Scientific and Industrial Research, Old Mill Road, New Delhi. The Director, Shri Ram Institute for Industrial Research, 19 University Road, Civil Lines, Delhi-8. The Registrar, University of Delhi, Delhi. The Director, National Physical Laboratory of India, New Delhi-12.
HOWRAH	The Principal, Bengal Engineering College, Sibpur, Howrah, West Bengal.
HYDERABAD	The Director, Scientific and Industrial Research, Osmania University, Hyderabad, Deccan. The Librarian, Asafia State Library, Afzalgunj, Hyderabad, Deccan.
JABALPUR	The Principal, Government Engineering College, Jabalpur, Madhya Pradesh.
JAMSHEDPUR	The Director, National Metallurgical Laboratory, Jamshedpur, Bihar.
JORHAT	The Principal, H.R.H. The Prince of Wales Technical School, Jorhat, Assam.
KANPUR	The Principal, Harcourt Butler Technological Institute, Kanpur, U.P.

(x)

KARAIKUDI	The Director, Central Electro-Chemical Research Institute, Karai-kudi, Madras.
LUCKNOW	{ The Librarian, Amiruddaula Public Library, Lucknow, U.P. The Director, National Botanical Gardens, Lucknow, U.P. The Director, Central Drug Research Institute, Lucknow, U.P.
MADRAS	{ The Curator, Record Office, Egmore, Madras. The Principal, College of Engineering, Madras. The Director, Central Leather Research Institute, Madras.
MUNICH (GERMANY)	The President, The German Patent Office, Munich-2, Germany.
MYSORE	The Director, Central Food Techno-logical Research Institute, Mysore.
PATNA	The Director of Industries, Bihar, Patna, Bihar.
POONA	{ The Curator, Lord Reay Maharastra Industrial Museum, Phule Market Tower, Poona-2, Bombay. The Director, National Chemical Laboratory of India, Poona-8, Bombay.
ROORKEE	The Director, Central Building Research Institute, Roorkee, U.P.
TRIVANDRUM	The Director, Central Research Insti-tute, University of Travancore, Trivandrum, Kerala.
WALTAIR	The Registrar, Andhra University, Waltair, Andhra.
WASHINGTON (U.S.A.)	The Commissioner of Patents, The Patent Office, Washington D.C.

The publications of the Patent Office other than printed specifications are available for free inspection also at the office of the High Commission of India, India House, Aldwych, London, W.C. 2.

PART I

Applications for Patents, 1952-54

This part contains the chronological list of applications for patents made during the years 1952-1954. The date and the number of each application, the name of the applicant and the title of the invention are stated in all cases except where the applications are deemed to have been refused (shown in this volume as "Void"), and the specifications in respect of which have not been published. These details are followed by a brief indication of the nature of the invention so as to supplement, in a few words, the information given in the title of the application.

The dates shown in crescent brackets are the dates allowed or claimed under reciprocal arrangements.

JANUARY 2, 1952.

46458. Void.

46459. Ram Yadav. Improvements in or relating to peak limiting amplifiers for audio frequencies. (Post-dated to September 16, 1952.) Comprising two stages of amplification followed by a cathode follower stage, all stages being single-ended, means for tapping audio output from cathode follower stage, means to rectify this output so that the rectified signal appears across a parallel combination of condenser and resistance whose output is applied to the gain control element, threshold d.c. bias being applied to the gain control element and removed from the rectifiers.

46460. American Cyanamid Company. Improvements relating to candle filters. (February 19, 1951.) Comprising a filter core, a base joined to one end of said filter core, a conical-shaped extension at the other end of said filter core, a central duct in said core and a number of transverse vents in the said core and a casing about the filter core.

46461. American Cyanamid Company. Improvements relating to heating arrangements for spinneret headings for use in the production of filaments from viscous spinning solutions. (April 27, 1951.) Comprises a body member detachably connected to a spinneret support, a longitudinal duct, a hollow heating unit with a bottom wall and a baffle and means for heating the hollow

heating unit and for introducing spinning solution into a passageway surrounding the said heating unit.

46462. Ciba Limited. Process for the manufacture of bromocholadienes. $\Delta^{20,23}$ -21 bromo-choladienes are prepared by reacting Δ^{23} -24, 24-diaryl-cholene with an N-bromo-dicarboxylic acid imide in the presence of an unsaturated aliphatic hydrocarbon halide.

46463. Harry Ferguson Research Limited. Improvements in or relating to motor driven vehicles. Steering one of the front and rear driven wheel means to a greater degree than the other wheel means during turns.

46464. Harry Ferguson Research Limited. Improvements in or relating to motor driven vehicles. Vehicle with wheels mounted on half axle means universally connected at their inner ends to the chassis has suspension system for resisting up and down movement of the half axles.

46465. Harry Ferguson Research Limited. Improvements in or relating to motor driven vehicles. Wheel assembly slides inwards or outwards as the axle assembly swings upwards or downwards relatively to the chassis.

46466. Harry Ferguson Research Limited. Improvements in or relating to motor driven vehicles. Differential gear for the driven wheels includes a worm wheel and application of brake force done through the differential gear.

46467. S. Elsky. Improvements in or relating to razors. A grating with holes through which hairs to be cut can pass is at the free end of casing telescopically slidable in handle and a cutter mounted on shaft is rotatably mounted on the casing.
46468. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric machines of low power. [Addition to No. 45252.] Bicycle hub dynamo consisting of two relatively rotatable parts, one of which consists of a multipolar permanent magnet supported in the hub by resilient means formed by one or more members secured to the hub and which members are resilient in an axial direction and rigid in a tangential direction.
46469. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to high-frequency coils. Wherein coil former wall is folded together over its length and circumference to have circular cross-section with a U-shaped part.
46470. James Beresford & Son Limited. Improvements relating to electric motors. (January 25, 1951.) Unoccupied space in chamber for stator coils filled with chemically inert, non-volatile liquid of high dielectric strength and high boiling point and chamber ends sealed liquid tight.

JANUARY 3.

46471. Imperial Chemical Industries Limited. Improvements in and relating to apparatus for the gasification of carbonaceous material. (January 18, 1951.) Main chamber is divided internally into smaller chambers in one of which partial combustion is carried out and in other carbonaceous material is gasified.
46472. Imperial Chemical Industries Limited. Improvements in and relating to the production of amines. (January 22, 1951.) Reacting an amino, nitro or nitro amino compound with a ketone containing 4 carbon atoms.
46473. Maatschappij Voor Kolenbewerking Stamicarbon N. V. Multi-hydrocyclone or multi vortex chamber and method of treating a suspension therein. The apparatus has a feed chamber common to all hydrocyclones.
46474. John Dalglish & Sons Limited. Method of and apparatus for air-drying textiles and the like. Conveying the cloth longitudinally in web formation,

directing one or more longitudinally flowing streams of air over both the surfaces of the cloth in the same direction.

46475. The Climax Rock Drill & Engineering Works Limited. Improvements relating to valve operating mechanism. (January 4, 1951.) Valve held in one of the two operative positions until any one of a number of factors reaches a predetermined value.
46476. The British Thomson-Houston Company Limited. Improvements in and relating to electric control devices. (January 26, 1951.) Comprises a source of unidirectional potential, means for applying it to output terminals, means for automatically delaying and varying the duration of pulses.

JANUARY 4.

46477. Void.
46478. Lamson Paragon Supply Company Limited. Improvements in and relating to document cases or files. (January 5, 1951.) Wherein eye portions of the posts are of loops of strip material.
46479. J. R. Geigy A.-G. Process for the production of thiosemicarbazones of pyridine aldehydes. (July 17, 1951.) Reacting unsubstituted or substituted pyridine aldehydes with thiosemicarbazide or with thiosemicarbazones of ketones.
46480. National Research Development Corporation. Improvements in or relating to the manufacture of amino compounds. (January, 15, 1951.) Reacting nitro compound with partially hydrogenated aromatic compound in presence of precious metal of the 8th group of periodic table.

JANUARY 5.

46481. Sardar K. S. Chowdhry. An appliance for playing a novel board game. Comprising a board with marked routes, counters and dice, counters representing mountaineers moving towards a snowy peak.
46482. Metropolitan-Vickers Electrical Company Limited. Improvements in and relating to alternating current electric measuring circuit arrangements. (February 9, 1951.) [Addition to No. 43577.] For obtaining response to poly-phase circuit a single meter element is employed the current coil of which connected for energization under control

of a transducer, connection being provided between star point of polyphase current transformer secondary and the centre point of control winding of the transducer.

46483. Ruhrchemie Aktiengesellschaft and Lurgi Gesellschaft für Wärmetechnik m.b.H. Catalysts for carbon monoxide hydrogenation. Adding iron powder to the precipitated catalyst portion.

46484. Chicago Pump Company. Diffusers. Collapsible porous bag secured to rigid hollow support, through which air under pressure is supplied to the porous bag.

46485. Hutter & Schrantz Aktiengesellschaft Siebwaren-Und Filztuch-Fabriken. Method of manufacturing wire netting, and wire netting manufactured by that method. Using wires with angular (flattened) cross section.

JANUARY 7.

46486. Krishnaiyengar Manivannan, Dr. Vasant Bhimrao Chipalkatti and Dr. Narasing Rao Kuloor. A process for improving the tensile strength of cellulosic yarns. Contacting the yarn with an aqueous solution of an aliphatic alcohol while keeping the yarn under tension.

46487. Void.

46488. Void.

46489. Automotive Products Company Limited. Improvements in or relating to liquid pressure control systems. (January 8, 1951.) Cup like packing member at hard resilient material with central boss having through passage controlled by non-return valve.

46490. Dunlop Rubber Company Limited. Improvements in battery cases. (January 13, 1951.) A battery case for secondary electric battery which incorporates an electric heating element.

46491. Imperial Chemical Industries Limited. New vat dyestuffs of the anthraquinone series. (January 19, 1951.) Reacting 2-(1-amino-2-anthraquinonyl)-5-(1 : 4-diamino-2-anthraquinonyl)-1 : 3 : 4-oxdiazole with an acylating derivative of an aromatic carboxylic acid.

46492. Imperial Chemical Industries Limited. Improvements in or relating to the manufacture of grafted acrylonitrile polymers and articles made therefrom. (January 26, 1951.) Polymeris-

ing acrylonitrile in the presence of a polymeric substance having a molecular weight higher than 1000 and capable of undergoing chemical combination with polymeric acrylonitrile chains.

46493. R. L. Warren-Smith. Improvements relating to decorative, ornamental, novelty or like articles and advertising signs. Having a supporting frame and over the said frame a covering produced by a method which includes spraying a web-coating over the frame.

46494. R. G. Le Tourneau, Inc. Towing tractor. The front and rear wheels are independently steerable in pairs.

46495. The Wellcome Foundation Limited. Improvements in preparation of 2 : 4-diamino-5-benzyl-pyrimidines. (August 29, 1950.) [Divided out of No. 44735. Antedated to March 7, 1951.] Condensing guanidine with α -formylhydrocinnamic ester and converting the aminohydroxypyrimidine formed to the corresponding 2 : 4 diaminopyrimidine.

JANUARY 8.

46496. American Cyanamid Company. Improvements relating to the preparation of substituted pteridines. (May 9, 1951.) By reacting a perbromide of 2-acyl-amino-4-hydroxy-6-methyl pteridine with an aminobenzoic acid or amide thereof.

46497. P. S. Jewell, J. G. T. King and G. C. Ingram. Improvements in or relating to the preparation of ingredients for foodstuffs. Gluten treated in the presence of water with an emulsion prepared by process of specification No. 46380 or by a previous run of this process.

46498. Void.

46499. The Wellcome Foundation Limited. A method of manufacturing 1-(5-chloro-2-thienyl)-1-(2-pyridyl)-3-pyrrolidinoprop-1-ene. (August 29, 1950.) [Divided out of No. 45690. Ante dated to August 20, 1951.] Dehydrating the corresponding carbinol and separating the required isomer from the other.

46500. C. A. Parsons & Company Limited. Method of splitting centripetal combustion turbine plants. Centripetal turbine divided into mechanically independent part; radial work turbine part disposed near inlet of centripetal part driving centrifugal compressor.

46501. N. D. Daroga, I. K. Panchal and G. B. Gadre. Improvements in or relating to ballot boxes. (Addition to No.

44966.) Sliding plate is adapted, in one extreme position of it to leave ballot paper slot open for its full length, and other extreme position of it to cover ballot paper slot completely.

46502. A. Musetti. Improvements in or relating to cellular bricks, blocks, slabs and like moulded articles. Dispersing agent made of sodium resinate and a colloidal substance for swelling the clay.

46503. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to stray field transformers for capacitive loads. Nonshunted ferromagnetic circuit comprising a primary winding provided with a secondary winding and the shunted part with a tertiary winding connected in series with the secondary winding.

JANUARY 9.

46504. Farbenfabriken Bayer. Process of printing and padding textile materials. (October 24, 1951.) Applying to textile material a polymer emulsion and a high molecular basic compound which, as such or as a salt, are soluble or emulsifiable in water and causing to react therewith on the material, a compound containing two or more reactive groups.

46505. Bristol Laboratories Incorporated. Process for the preparation of beta-Disubstituted-Aminoethyl ortho-aralkylphenyl ethers and ethers so prepared. Dissolving an aralkylphenol in an organic solvent, preparing the corresponding alkali metal α -aralkylphenoxides, heating with β -disubstituted aminoethyl chloride hydrochloride, adding a polycarboxylic acid and water to the mixture.

46506. J. Lecher. Improvements in or relating to methods of an apparatus for reducing the size of particles of solid material. (November 2, 1951.) Particles carried in gaseous fluid are simultaneously caused to collide and subjected to intense sonic energy (as defined therein).

46507. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric discharge tubes. Electrically conductive coating of the envelope connected by a conductor to one electrode, said conductor being provided with an insulating envelope.

46508. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to wiring supports for use at high voltages. Constituted primarily by solderable

metal part secured to a supporting plate and which has soldered to it at least one connected wire.

JANUARY 10.

46509. Westinghouse Brake & Signal Company Limited, and W. R. Sykes Interlocking Signal Company Limited. Improvements relating to interlocking block apparatus for the control of railway traffic on single lines. (January 11, 1951.) Of the kind comprising a line circuit composed of a single line wire and a return extending between two stations, these being at each station an electrically operated handle having "line closed" position with a "train going" position and a "train approaching position", one on either side of "line closed" position, each handle having lock device for preventing movement.

46510. Pittsburgh Consolidation Coal Company. Improvements in or relating to method of converting carbon to electrical energy. Reacting steam and an oxidising gas with carbon and oxidising the gaseous products in a electro chemical zone to convert its heat of reaction to its electrical energy.

46511. Pittsburgh Consolidation Coal Company. Improvements in or relating to an integrated gasification electrochemical system. Reacting hydrogen and carbon monoxide and an oxidising gas in a fuel cell to produce electrical energy.

46512. Ford Motor Company of Canada, Limited. Vehicle body construction. Windcord has an enlarged resilient sealing portion and a smaller beaded portion spaced from the sealing portion and connected to it by a flexible webbing.

46513. Schlumberger Well Surveying Corporation. Method and apparatus for perforating well casing and the like. Perforating means directed an angle, preferably upwardly, to longitudinal axis of bore hole and a normal thereto.

JANUARY 11.

46514. B. V. Patankar. Sliding doors and windows. In sliding doors and windows, the door panels or window shutters are fixed with bolts and nuts to sliders at the top and bottom ends of the panels or window shutters said sliders being fork shaped to engage the track.

46515. Eruchshaw Nariman Contractor. Improvements in or relating to taps and valves. (January 12, 1951.) Void after publication. Cores for inlet, outlet and valve chambers are readily insertible and withdrawable.

46516. Void.

46517. Void.

46518. Variapat A. G. Improvements in and relating to a process for preparing N-2'-(4"-chloro-2"-sulfophenoxy-1")-5'-chlorophenyl-N'-3, 4-dichlorophenyl-urea." Condensing a salt of 2-amino-4, 4'-dichloro-1, 1'-diphenylether-2'-sulphonic acid with 3, 4-dichlorophenyl-isocyanate in anhydrous acetonitril.

46519. Mavor & Coulson Limited. Improvements in scraper conveyors. Including endless series of interconnected components which in their working run travel along a passage entraining material supplied to the passage.

JANUARY 12.

46520. Saunders Valve Company Limited. Means for sealing an oscillating spindle. (March 15, 1950.) [Divided out of No. 43067. Ante-dated to May 3, 1950.] Double sleeve of U-longitudinal section secured at the outer end to the casing wall and at the inner end to spindle.

46521. Imperial Chemical Industries Limited. Improvements in or relating to bis biguanides having bactericidal properties. Treating polymethylene bis-dicyandiamide with aromatic amine.

JANUARY 14.

46522. Void.

46523. Imperial Chemical Industries Limited. Improvements in or relating to a process for the formation of masking images in colour photography. (January 31, 1951.) [Addition to No. 41853.] As functional derivative of the aromatic aldehyde used for the treatment of the multilayer photographic element subsequent to colour development there is used an aqueous solution of an anil of the aldehyde.

46524. Horizons Titanium Corporation. An electrolytic process for the production of titanium monoxide. Electrolysing titanium dioxide in a molten bath of alkaline earth metal halides with or without addition of alkali metal halides,

in inert atmosphere and preventing anode zone materials from circulating to monoxide-forming zone.

46525. Horizons Titanium Corporation. An electrolytic process for the production of titanium. Electrolysing titanium monoxide in a molten bath of alkaline earth metal halides and/or alkali metal halides, in non-oxidising atmosphere.

46526. Horizons Titanium Corporation. Thermal preparation of titanium monoxide. Heating pure titanium carbide with titanium dioxide and/or an oxide of a metal, other than radium, of Group Two of the Periodic Table.

46527. T. M. M. (Research) Limited. An improved process for the production of textile yarns. (January 24, 1951.) The degree of draft introduced at the first drawing stage exceeding by a substantial amount that which is necessary to produce a silver of the same weight per unit length as each input silver.

46528. D. Dalin. Extended surface heat exchanger. (March 14, 1951.) Comprising a metal tube, W-shaped wire elements having a pair of outer legs and a pair of inner legs connected to one another and to outer legs by loops and means securing the element to the tube with its outer legs and the loop joining the inner legs respectively joined to the tube with good heat conducting connection.

46529. Schlumberger Overseas, S. A. Electrical logging apparatus. Electrode with a pair of electrode means disposed symmetrically above and below the electrode and movable with it with means to maintain potential difference between the electrode and electrode means at zero.

46530. Schlumberger Overseas, S. A. Electrical logging of earth formations traversed by a bore hole. Method and apparatus for obtaining localized resistivity measurement against the wall of the bore hole and isolated from bore hole fluid.

JANUARY 15.

46531. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to new phenthiazine derivatives. (December 19, 1951.) Meta chloro—or bromo—diphenylamine is allowed to undergo conversion by known methods for the conversion of a diphenylamine

into an N-dialkylamino-alkylphenthiazine.

46532. Societe Des Usines Chimiques Rhone Poulenc. Phenthiazine derivatives. (December 19, 1951.) Condensing 1- or 3-chlorophenthiazine or a mixture thereof with a 3-dimethylamino-1-halogeno-propane in the presence of an acid-binding agent.
46533. Dr. J. Hammerschmid. Process for the production of a tissue extract and of a serum activated thereby. Inflicting wounds to living beings, allowing the wound to heal, excising the granulation tissue formed in the wounds after healing and extracting the excised tissue.
46534. General Railway Signal Company. Improvements in code communication systems for centralised traffic control on rail roads. For centralised traffic control on rail roads for the control of switch points and/or signals at a field station by the actuation of manually operable control devices at the central station and/or for the transmission of an indication of the existing condition of switch points or signals and track circuits at the field station to the central station.
46535. Sina Viscosa Societa Nazionale Industria Applicazioni Viscosa, Societa Per Azioni. Process for the utilization of exhausted liquors in wood digestion. Pentoses contained in the exhausted liquors in wood digestion are converted to furfural by heating the liquors without addition of free acids and salts at a temperature not lower than 160°C.
46536. Sina Viscosa Societa Nazionale Industria Applicazioni Viscosa, Societa Per Azioni, and G. Diotti. Improvements in and relating to processes for the utilization of exhausted liquors in wood digestion. [Addition to No. 46535.] Exhausted liquor is heated for converting pentoses into furfural and then the liquor is submitted to a concentration whereby furfural can be recovered and the concentrated mother liquor is used as fuel.
46537. Sina Viscosa Societa Nazionale Industria Applicazioni Viscosa, Societa Per Azioni, and G. Diotti. Process for the utilization of exhausted liquors, also through the obtainment therefrom of useful substances which can be separated by distillation. Exhausted liquor is subjected to a first concentration then the pentoses contained therein are converted into furfural, and then the liquor is subjected to final concentration and furfural separated.
46538. V. Rawls. Improved tyre lug. Buffing the old lug and applying cement thereto, positioning on the cemented surface a replacement lug and vulcanizing the said lug *in situ*.
46539. Davy and United Engineering Company Limited. Improvements in or relating to conveyor systems, particularly for conveying ingots to rolling mills. (January 16, 1951.) Two track sections movable between positions in which they are in alignment or inclined to one another.
46540. Withdrawn.
46541. Vereinigte Kugellagerfabriken Aktiengesellschaft Schweinfurt. Bearing units for spindles of spinning frames and twisting frames. Comprising anti-friction type of neck bearing rigidly supported in the spindle bolster, a centering sleeve carrying the footstep bearing fitted in the spindle bolster and a damping means between the spindle bolster and centering sleeve.
46542. Societe Solumeta. Improvements relating to the manufacture of red-lead. Passing a mixture of lead vapour and oxygen containing gas in a reaction zone in a direction inclined with respect to vertical.
46543. Research Corporation. Antibiotic and method of preparing it. Growing organism *Streptomyces Noursei* in contact with sterile liquid nutrient medium.

JANUARY 16.

46544. Capt. A. N. D'Silva. Aerator whisking machine. Comprising means for churning the mixture and means for simultaneously pumping air into the the mixture being churned.
46545. Capt. A. N. D'Silva. Electric fan. Having a spherical or hemispherical bowl with vanes punched into it.
46546. Capt. A. N. D'Silva. Slice-cutting machine. Comprising a blade having a cam which engages in a cam-track provided in a rotatable disc.
46547. Capt. A. N. D'Silva. Asbestos-cement electric stove. Making the grid and frame of the stove from asbestos-cement.

46548. Capt. A. N. D'Silva. Self-filling mechanism for Fountain pens. Comprising a piston working in an oval shaped barrel and provided with a piston head made of two slotted discs, one circular and the other oval shaped, the circular disc being fixed to the piston rod.

46549. Automatic Telephone & Electric Company Limited. Improvements in electronic telecommunication systems. (February 23, 1951.) Switching arrangement comprises a plurality of sets of gas discharge paths arranged in groups each set adapted to be struck to complete connections between input and output paths.

46550. Automatic Telephone & Electric Company Limited. Improvements in electrical bridge circuits. (January 24, 1951.) Includes a rectifying device functioning to rectify alternate half waves of the alternating current input.

46551. Automatic Telephone & Electric Company Limited. Improvements in containers for loading coils as used for telecommunication purposes. (January 18, 1951.) Container of elongated shape has a stub cable through a gland at each end.

46552. Evans Bellhouse Limited. Improvements in moulded packing units for the protection of goods in transport and when stored. (January 17, 1951.) Discrete pieces of natural cellulosic material mixed with adhesive and set by application of heat and pressure.

46553. Metallgesellschaft Aktiengesellschaft. Improvements in or relating to a method of producing materials with surface-active properties. (November 13, 1951.) Mixing carbonaceous substance, with an activating substance conducting the mixture in the form of suspension in a gas through treatment zone and transmitting heat by means of moving heat transferring solids.

46554. Metallgesellschaft Aktiengesellschaft. Method of purifying, decoloring, sterilising or filtering liquids containing colloids. (November 14, 1951.) Contracting the liquids with active carbon produced in Indian Patent Nos. 43831 and 46553 and British Patent No. 679095.

46555. "Licencia" Talalmanyokat Ertekesito Vallalat. Improvements in and relating to pneumatic valves, more particularly for inflatable members. Having a longitudinal medial portion,

an outer flange and an inner flange provided at the ends of said medial, forming a recess for receiving a reinforcement and a longitudinal air channel.

46556. Void.

46557. Elektrokemisk A/S. Improvements in or relating to a process for the manufacture of carbide or metals in electric smelting furnaces. Introducing fine grained charge into the furnace at a region spaced from the electrodes, the remainder of the charges being introduced around the electrode.

46558. Cluett, Peabody & Co., Inc. Method of connecting superposed layers of textile fabrics by shrinkless seams composite sewing thread for use therein, and the fabrics so connected. Stitching the fabrics together with a plurality of sewing threads and employing at least one composite thread having a component that disintegrates in the usual laundry washing solutions and another that is insoluble in the said solution.

46559. E. Holz. Improvements in or relating to devices for forcing nails, pins, dowels and like fastenings into a wall or the like. By a striker hammer under pressure of gas wherein spring is pressed by displacing a movable casing in direction of projection.

JANUARY 17.

46560. S. Junghans. Apparatus for continuous casting of metal rods. Comprising a ladle, a distributing trough, a number of individual troughs each being provided with controlling means for the passage of liquid metal and a number of continuous casting units.

46561. Union Carbide and Carbon Corporation. Vacuum insulated containers and process for evacuating same (October 23, 1951.) A receptacle containing an absorbent material is provided in the container.

46562. V. E. DePenning. Improvements in joints of rails of railway permanent way. (November 13, 1951.) Rails supported at the joint both vertically and laterally by fish plate divided into two bars mutually engaging by lugs and corresponding slots, one bar being fixed to one rail and the other to the other rail.

46563. Robert Bosch GMBH. Improvements in or relating to speed governors. A slide is formed in an intermediate lever for reception of fulcrum being open at least at one end.

JANUARY 18.

46564. A. Magnani, and F. L. Smith & Co. A/S. Improvements relating to the manufacture of fibrous cement sheets. (January 19, 1951.) Feeding and distributing fibrous cement material over a suction support and forming the material into a sheet thereon and pressing and calendering the sheet.

46565. Wingfoot Corporation. Improvements in mold structure. Consisting of body having cavities therein, a cover metal sheets secured to grooves therein and resilient member secured on the metal strips.

46566. T. M. M. (Research) Limited. Improvements in the creels of textile spinning machinery. (February 6, 1951.) A stator, a rotor mounted on said stator, an internal annular projection on said rotor and means for fixing the stator to the creel.

JANUARY 19.

46567. Void.

46568. Imperial Chemical Industries Limited. New stillbene derivatives for use in whitening textile materials. (February 15, 1951.) Comprising condensing cyanuric chloride with 4:4'-diaminostilbene-2:2'-disulphonic acid, monoethanol-amine and 4-aminodiphenyl.

JANUARY 21.

46569. P. Shamrao. An improved cooker for iddalies, puddings or the like. A cooker has frames having openings for dishes and for passage of steam, the frames being supported on legs.

46570. The Mond Nickel Company Limited. Improvements relating to a method of and a machine for making tubes. (March 7, 1951.) Wherein welding is effected partly externally and partly internally such that the two welds meet without any substantial interdiffusion between them.

46571. John B. Pierce Foundation. Improvement in snap disc springs and methods of manufacture. Compressing resilient sheet blank between a concave and a convex die, compressing forces being equally distributed.

46572. Vickers-Armstrongs Limited. Improvements in or relating to, manually or foot operated wire stitching machines. Cam means having cam surfaces for

actuating a staple preparing mechanism, cam surfaces for actuating a forming and driving mechanism to form a staple, a lever for imparting rocking movement to said cam means.

46573. The Monotype Corporation Limited. Improvements in or relating to optical systems for photo-mechanical typographic-composing machines. A pair of right angled triangular prisms arranged in overlapping relation to reflect image from one to the other and mounted in holders.

JANUARY 24.

46574. N. T. E. Goudie, and B. Davies. A holder for flexible electric cables. (February 15, 1951.) Base for securing to ironing board or other structure, detachable self erecting standard means for connecting flex to standard.

46575. Council of Scientific and Industrial Research. A process for saccharifying cellulosic material, particularly agricultural residues. Removing pentoses by dilute acid hydrolysis drying the residue, followed by hydrolysis with dilute sulphuric acid.

46576. Council of Scientific and Industrial Research. A process for saccharifying cellulosic material such as agricultural residues. Hydrolysing with dilute sulphuric acid, removing the 5-carbon sugar solution, drying the residue, impregnating with concentrated sulphuric acid and prior to hydrolysis incubating the acid impregnated residue.

46577. Void.

46578. K. V. Karantha. Improved conical street light reflector. The top cone of the double cone reflector is replaced by a much smaller piece.

46579. Societe des Usines Chimiques Rhone Poulenc. Hydrogenation catalysts and a process of hydrogenation. (December 14, 1951.) By the use as a catalyst of precipitation product obtained by reacting alkali borohydride with a salt of nickel, cobalt or copper.

46580. Societe des Usines Chimiques Rhone Poulenc. Improvements in or relating to a process of hydrogenation and to novel catalytic agents therefor. (December 14, 1951.) Comprising nickel boride and/or cobalt boride in intimate association with one or more promoter metals.

46581. The General Electric Company Limited. Improvements in or relating to apparatus for indicating phase relationship between electrical quantities. (January 24, 1951.) Two electrical quantities, one dependent on phase of current in one phase of circuit, and the other is derived from polyphase voltages through phase shifting device applied along separate paths two phase discriminator; means for adjusting phase shifting device and indicating such adjustment.

46582. Fusarc Limited. Portable welding or cutting machine. (January 24, 1951.) Variable-speed mechanism contained in hollow body for rotating castor supporting the body.

46583. Imperial Chemical Industries Limited. Improvements in or relating to pest control compound vapour generator. (April 13, 1951.) Heating charge consists of a mixture comprising oxidising and reducing agents adapted on ignition to react without evolving gases.

46584. Dunlop Rubber Company Limited. Improvements in or relating to the softening of rubber. (May 26, 1950.) [Divided out of No. 45073; Ante-dated to April 30, 1951.] Mechanically working rubber in the presence of oxygen and a heterocyclic thiocarbonyl compound, whose thiocarbonyl atom is directly linked to 2 nitrogen atoms.

46585. H. Ishizuka. Method for manufacturing titanium tetrachloride. Chlorinating pulverized slag obtained by reducing titanium-containing iron ores.

46586. British Insulated Callender's Cables Limited. Improvements in protective coverings for electric cables, pipes and the like. (February 19, 1951.) Covering of two staggered helical lappings or composite tape having thin carrier layer high modulus of elasticity and an unvulcanised rubber layer; types applied with rubber layers in contact.

46587. American Cyanamid Company. Improvements relating to substituted quinazolones. (March 27, 1951.) By hydrolysis of substituted quinazolones having a group COR" wherein R" is OC_2H_5 or the like radical.

46588. Standard Telephones and Cables Limited. Improvements in or relating to electric capacitors. (February 26, 1951.) Impregnating capacitors with base resin before sealing.

46589. K. Goedel. Improvements in or relating to roof coverings. (December 12, 1951.) Plates which can be hung to one another are stiffened by hollow beads, transverse folds and by flanges.

46590. Void.

46591. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a method of calibrating glass bulbs. Glass envelope calibrated by means of a gauge comprising parts which are radially movable relative to one another, urged from one another until the required diameter is reacted and the envelope engaging parts of the gauge due to heating and the vacuum produced inside.

46592. Void.

JANUARY 25.

46593. The British Thomson-Houston Company Limited. Improvements relating to the introduction of getters into the evacuated envelopes of electric incandescent lamps and discharge devices. (February 9, 1951.) Zirconium incorporated into the tungsten of which the wire forming the filamentary electrode is composed.

46594. V. R. Brave. Colour-emulsion-coated-transparent-adhesive-tape and exposure-accessory for cameras and projection-accessory for the picture projector or employing it. Each pin point of the tape having a coating of three primary colours, the tape being devised to act as colour filters in exposure and as colour-selectors for projection of the black and white photographic films.

46595. Gewerkschaft Rheinpreussen. Process for the manufacture of alkamine esters of N-monoalkylated and N-monoalkyl-oxyalkylated hydroxyaminobenzoic acids. (January 21, 1952.) Converting N-monoalkylated or N-monoalkyl-oxyalkylated hydroxy-amino-benzoic acid to the ester of an amino-alcohol.

46596. Essoldo Circuit (Control) Limited. Improvements relating to the projection of cinematograph films. (January 16, 1951.) Film with at least one trace and thermionic device having spaced terminals connected in control grid circuit of a valve and adapted to be bridged by the trace.

46597. Essoldo Circuit (Control) Limited. Improvements relating to the projection of cinematograph films. (January 26, 1951.) Spaced terminals disposed in

- proximity or in contact with film connected to electrical circuit responsive to bridging of terminals by conductive trace on film.
46598. Essoldo Circuit (Control) Limited. Electrical control devices particularly for the projection of cinematograph films. (September 4, 1951.) Thyatron valve in a circuit responsive to change in static electric potential developed across contacts in its grid circuit and in rubbing contact with film, by passage of film normally biased to cut off potential.
46599. Essoldo Circuit (Control) Limited. Improvements relating to the actuation of electromagnetic relay means, particularly for the control of cinema programmes and projection cinematograph films therein. (January 26, 1951.) Projection of film by incoming projector effected by electrical impulses generated by conductive traces on film on outgoing projector which energise relays in the arc and the motor circuits of incoming projectors and relays for operating dowers and connecting sound amplification apparatus.
46600. Essoldo Circuit (Control) Limited. Improvements relating to the control of cinema and like programmes. (January 26, 1951.) Movable control device with selectively locatable actuator means for generating electric control in pulses or displacing mechanical control members automatically in predetermined sequence and independently of projection of film.
46601. Gevaert Photo-Production N. V. Improvements in or relating to photographic development. (January 26, 1951.) Where a reducible silver salt image is developed by a developing agent having the formula $Y-Ar-NH-CZZ^1-SO_3M$.
46602. Ford Motor Company of Canada, Limited. Hinge for automotive vehicle bonnets and the like. Comprises two links pivotally connected at their upper ends to the movable closure, pivotal means connecting lower end of one link to the vehicle body, a link connecting the opposite end of pivot member to one of the said pair of links, and spring means connected to said hinge for opening the closure.
46603. Rempel Manufacturing Canada Ltd. Apparatus for producing hollow plastic articles. Comprising a sectional cavity mold, conveyer for moving the mold in a predetermined path and means for providing compound rotation of the mold to cause criss-cross flow of the plastic material inside the mold.
46604. A. Singh. Improved chaff cutter. Driving wheel while it is rotated raises a cutting blade against the force of spring and releases the blade to cut stalks.
46605. A. Singh. Improvements in or relating to chaff cutters. Cutter drum having spirally disposed blades on it, is mounted with its axis longitudinally parallel to feed rollers.
46606. V. D. Bhargava. Improvements in or relating to internal combustion engines. Fuel air charge compressed in compressor cylinder delivered to power cylinder through pipe connecting their outlet and inlet ports respectively without provision of valves.
46607. U. P. Ghatak and J. Kabra. Improved means or jigs for boring and machining axial bores in the stand of a chaff cutter machine. The base plate is detachably secured to a disc adapted to engage a platform detachably, the arrangement being such that after one wall is bored the disc is released, the bracket is turned through 180° for the other wall to be bored.
46608. American Patents Corporation. Treatment in pickling baths of artificial filaments and fibres of proteins. After having the spinning bath and before being hardened the filaments are submitted to the action of an acid-saline pickling bath.
46609. Carlo Erba S.p.A. Procedure for the N-dichloroacetylation of arylaminoalcohols. (August 27, 1951.) Reacting aminoalcohols with pentachloroacetone.
46610. Carlo Erba S.p.A. Process for the resolution of dl-threo-1-p-nitrophenyl-2-amino-propandiol-(1,3) into optical isomers. (August 27, 1951.) Reacting the racemic base with d-hydroxymethylene camphor, separating by fractional crystallization the d- and l- base and isolating the optically active bases as hydrobromides.
46611. S. K. Banerjee. Clip for filing papers with locking device. Comprising two relatively movable plates provided with upstanding posts and adapted to co-act one with the other.

JANUARY 28.

46612. Void.

46613. Void.

46614. Scientific Oil Compounding Company Inc. Fungicidal compositions. Comprises a product obtained by reacting a water-insoluble metal quinolino-late with a water insoluble metal carboxylic acid soap and a phenol.
46615. Dunlop Rubber Company Limited. An improved method of making tennis and like inflated balls. (February 21, 1951.) Temporarily mounting yarn of feltable material upon backing member, raising fibres on surface of yarn, removing yarn from backing member, covering inflated core with said yarn and felting covering in position.
46616. Imperial Chemical Industries Limited. Improvements in or relating to the manufacture of pyrimidine derivatives. (February 16, 1951). Reacting a malondiamide with formic acid.
46617. T. J. Smith & Nephew Limited. Improvements in and relating to medical and surgical bandages, dressings, plasters and the like. (January 30, 1951.) Microporous membrane or film one surface of which carrying an adhesive.
46618. Ciba Limited. Process for the manufacture of hydrazine compounds. Treating with hydrazine, a pyridazine having a mercapto group in at least one of the two ortho-positions relative to the ring nitrogen atom or a corresponding disulfide.
46619. Ciba Limited. Process for the manufacture of hydrazine compounds. Treating with hydrazine a pyridazine containing an amino group in at least one of the two ortho-positions relative to ring nitrogen atom.
46620. Void.

JANUARY 29.

46621. Dr. R. S. Dubey, Dr. N. R. Kuloor and V. P. Singh. A process for the utilization of carbonation filter mud to render it suitable for use in the clarification of sugar containing liquids. Carbonation filter mud is calcined and mud again in the carbonation process for purifying the sugar juice.

46622. Smitsvonk N. V. Electric ignition system. With a surface discharge plug, a condenser, a magneto for charging the condenser, and a switch by means of which the spark plug can be periodically connected in parallel with the condenser.

46623. Smitsvonk N. V. Electric ignition system. With at least one surface discharge spark plug, at least one condenser, a magneto for charging said condenser(s) and a switching device for alternately connecting the condenser(s) with the magneto and with the spark plug(s).

46624. Ciba Limited. Process for the manufacture of new degradation products of elemadienolic acid and its derivatives. An oxidising agent is reacted upon the compounds which are obtainable from elemadienolic acid by elimination of the carboxyl group.

46625. Void.

46626. Ciba Limited. Process for the manufacture of new ketones. Oxidising a compound obtainable by reducing the carboxyl of elemadienolic acid into the hydroxymethyl group and eliminating the hydroxyl with formation of double bond.

46627. Lonza Elektrizitätswerke Und Chemische Fabriken Aktiengesellschaft. Improvements in or relating to the manufacture of cellular bodies from thermoplastic synthetic materials. By incorporation of gases under pressure into thermoplastic materials, cooling the gas containing mass and subsequently expanding the mass by heating it to form cells.

46628. Mefina. S. A. Releasing mechanism for fuses of explosive units, machinery or alarm systems. The mechanism has a releasing means having a spring serving both for locking and operating the means.

46629. Monsanto Chemical Limited. Improvements relating to coating compositions. Comprising organopolysiloxane resin and alkyl titanate dissolved in organic solvent.

JANUARY 30.

46630. Void.

46631. K. K. Clarke. A very high gain electronic circuit. In which the screen grid voltage of a voltage amplifier type pentode valve is operated at from one to twenty per cent of the plate supply potential and anode load resistor is increased to the order of magnitude of internal anode resistance.

46632. A. K. Mitra and D. P. Burma. The production of methylmethacrylate monomer from methylmethacrylate polymer. By cracking methylmethacrylate

polymer in presence of siliceous material.

46633. Inventors' Industrial Corporation Ltd. Improvements in machine for closing the mouth of the biri casing after it is filled with tobacco. (Addition to No. 42302.) With the movement of the operating rod a finger closes the mouth of the biri casing and then adopts an idle position, similar movement being repeated at intervals around the mouth of the casing to completely close the mouth of the biri.

46634. Lock Joint Pipe Company. Improvements in or relating to pipe sections. (April 19, 1951.) Provided with a conduit, a ring formed from said conduit, said ring being secured to said conduit in contacting relationship so that they together form a gasket-sustaining surface for seating a gasket in sealed condition.

46635. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to electrodes for arc welding. (February 2, 1951.) Of the types comprising two or more cores coated with flux material for use with multiphase power supply, wrapping means for binding together individual covered core to form composite electrode.

FEBRUARY 1.

46636. Void.

46637. G. Casati, and C. Cazzaniga. Weft threads carrying device for circular weaving looms. (20th July 1951.) An electromagnetic roller rotatably mounted on a spindle, an auxiliary rotatable roller coupled with the said roller to be displaced around the main shaft, a carriage, a funnel for weft spools and a V-shaped bent needle.

46638. S. I. Aronovsky, and E. C. Lathrop. Cellulosic pulp and method of manufacturing the same. Heating alkaline cooking liquid and the cellulosic material to a cooking temperature and subjecting the latter to a succession of sharp impacts without substantially cutting or tearing the cellulose fibres.

46639. Automatic Totalisators Limited. Ticket printing and transaction registering means for race totalisators. (February 2, 1951.) Comprises a plural throw eccentric member rotatably mounted on the frame and the throws are differently directed, type wheels equal in number to the throws freely mounted.

46640. The General Electric Company Limited. Improvements in automatic switching apparatus for use in automatic telephone exchanges. (February 2 1951.) Comprises two or more gate devices, selectors responsive to channel identifying signal and connections for applying gating pulses to gate devices.

46641. Monitor Engineering and Oil Appliances Limited. Improvements in or relating to oil burning appliances. (February 3, 1951.) A source of compressed gas is connected to the tank and is controlled by means sensitive to pressure existing in the tank.

46642. National Malleable and Steel Castings Company. Improvements in or relating to a car coupler. Stop means provided on the top and bottom of coupler for engagement with jaw of opposing coupler to limit relative vertical displacement.

46643. American Cyanamid Company. Improvements relating to acrylonitrile. (June 25, 1951.) In a method of producing acrylonitrile by reacting acetylene and hydrocyanic acid in presence of acid reacting aqueous catalyst solution, periodically withdrawing a portion of the catalyst solution and adding cuprous chloride.

46644. Chemical Construction Corporation. Improvements in or relating to recovery of metals from arsenic-containing metallic ores. (November 28, 1951.) Forming aqueous slurry, subjecting slurry to oxidation, separating resultant solution from residual solids and removing from clarified liquor cobalt.

FEBRUARY 2.

46645. K. S. Goppu. An improved cork screw. A metal piece fixed pivotally to the stem of the cork screw falls to a horizontal position from the stem after the stem passes through the cork.

46646. American Cyanamid Company. Improvement relating to polymers of compounds containing at least one ethylenic double bond. (April 23, 1951.) Polymerising in acidic aqueous solution in presence of catalyst comprising chloric acid together with sulphurous acid and/or hydrosulphurous acid.

46647. Chemical Construction Corporation. Improvements in or relating to recovery of precious metal content in arsenic-bearing ores and concentrates thereof. (November 28, 1951.) Forming aqueous slurry with leaching liquor.

subjecting slurry to oxidation, collecting and washing residual solids, dissolving gold content of solids by cyanidation.

46648. Chemical Construction Corporation. Improvements in or relating to recovery of metals from arsenic-containing metallic ores. (November 28, 1951.) Forming slurry, oxidising slurry and treating slurry with a material capable of furnishing cations the arsenates of which are water and acid-insoluble.

46649. Dunlop Rubber Company Limited. Reinforced fireproof hose. Comprising a lining tube of rubber, an inner reinforcement of tubular wire-braiding thereover, an outer metal reinforcement and tubular asbestos-braiding interposed between the inner and outer reinforcements.

FEBRUARY 4.

46650. H. Pearce and R. W. Homewood. Improvements in or relating to soldering devices. (February 5, 1951.) Void after publication. Comprising a non-metallic body having a passage which opens into its external surface, the said passage accomodating at least two conductors and a solder.

46651. The Wellcome Foundation Limited. Diphenyl ketones of pharmaceutical value and the preparation thereof. (February 12, 1951.) Treating the corresponding nitrile with grignard reagent.

FEBRUARY 5.

46652. Indian Telephone Industries Ltd. Improvements in or relating to electrical measuring apparatus. Consisting of a circuit having two branches fed from a common source of alternating current by way of fixed non-inductive resistance, a non-inductive resistance bridging two branches and means for comparing the voltages developed across said resistances.

46653. Gewerkschaft Rheinpreussen. A process for the production of esters of N-mono-alkylated and N-mono-alkyloxyalkylated hydroxy-amino-benzoic acids with amino-alcohols substituted at the nitrogen atom. (January 28, 1952.) By introducing an alkyl or alkyl-oxyalkyl radical into the aromatic amino group of an alkamine ester of hydroxy amino benzoic acid.

46654. Mechanical Products Inc. Improvements in and relating to electric circuit breakers. Latching engagement provided on one side only of a relatively fixed guide structure and the thermal latch.

46655. American Patents Corporation. Improvements in the manufacture of artificial filaments and fibres of proteins. Before spinning, the proteins are caused to absorb at least one soluble nitrogenous substance and at least one fatty substance which can combine with said nitrogenous substance.

46656. Svit. narodni podnik. Improvements relating to the manufacture of boots and shoes. Making a plaited cord by twisting to spiral from two strips of material in one direction after which they are twisted together in counter-direction, and then connecting the cord to a shoe at the welt.

46657. Void.

46658. Dunlop Rubber Company Limited. Apparatus for reducing the diameter of plastic cylindrical bodies. (February 6, 1951.) Three parallel rollers rotatably mounted in bearings slidably radially and towards a common axis parallel to the rollers, grip the cylindrical body, and means urge the rollers against the body.

46659. Dunlop Rubber Company Limited. Apparatus for the optical examination of the profile of an article at a given cross-section. (February 6, 1951.) Employing a light beam as a background to a silhouette of a cross-section of the tubing, the image thereof being projected onto a screen by a lens.

46660. Chicopee Manufacturing Corporation. Treatment of fibres. Moving in contact with the fibres a suspension in gas of separated particles of the material to be applied in which 95 per cent. of the mass of the material consists of particles of dimension of not more than twice the thickness of the fibres.

46661. The British Thomson-Houston Company Limited. Improvements in and relating to control and power regulation for lift motors and the like. (February 19, 1951.) Grid circuits of rectifiers connected to motor armature, field windings and slip rings controlled by difference of a reference voltage and a voltage dependent on motor speed to vary ignition angles of rectifiers.

46662. Hugh Wood and Company Limited. Improvements in switches for use with conveyors. (February 15, 1951.) Hand operated switch and a time delayed switch in series with the pilot circuit the time delayed switch also in parallel with a relay energised by generator.

FEBRUARY 6

46663. Societe Pour Le Traitement Et L'Amelioration Des Tissus. Improvements in treatment of fibrous materials. Impregnating with a compound of silica which is dissociable by heat into silica and a volatile compound, thereafter subjecting the material thus impregnated to a heat treatment.
46664. Saurefabrik Schweizerhall. Process and apparatus for the preparation of finely divided oxides from volatile metal chlorides. (June 16, 1951.) Controlling moisture content of gas current sustaining a flame which ignited a mixture of metal vapour and oxygen-containing gas.
46665. T. Hindmarch. Improvements in and relating to reverse direction couplings. [Divided out of No. 45256; Ante dated to May 29, 1951.] One or more friction brakes are mechanically connected between each prime mover and the frame of the machine.
46666. Societe Anonyme Potasse Et Engrais Chimiques. Improved process of manufacture of fertilisers. At any stage of manufacture a magnesium compound is added, the weight being 0.1 to 2% of the weight of the finished fertiliser.
46667. P. S. Weinstein and S. Joukovsky. Improvements in containers for viscous products. Comprising a tubular body adapted to house a deformable inner container and means for holding said container against relative movement.

46668. Void.

FEBRUARY 8.

46669. Void.

46670. Void.

46671. American Car and Foundry Company. Method and apparatus for fabricating a railroad car side. Assembling metal panels side by side and welding them together then applying and welding a top and a bottom rail to a welded panel unit and then applying and welding stakes to the panel unit.

46672. J. Stone & Company (Deptford) Limited. Improvements relating to electromagnetic cut-in and cut-out switch gear for electrical generating equipment. (February 9, 1951.) Comprising a contactor switch controlled by a voltage responsive relay having a shut winding and a series winding and having lock-out arrangement.

46673. British Insulated Callender's Cables Limited. Improvements in the

manufacture of a metal tube which may form part of an electric cable. (February 19, 1951.) Bending a metal tape to tube form and bending a second tape over it one of the tapes before bending having a coating of solder metal, applying flux to solder coated strip or to the other tape at portions which will become contiguous with such solder coated strip and heating in the region of the solder coated strip.

46674. Westinghouse Brake & Signal Company Limited. Improvements relating to variable leverage mechanism for fluid pressure braking apparatus for railway and other vehicles. (February 9, 1951.) To position fulcrum correctly track is moved away from the brake lever as it returns to its brake release position.

46675. The General Electric Company Limited. Improvements in or relating to pressure welding. (February 9, 1951.) Welding pressure applied to a strip like area whose width is at least three times the thickness of the member.

46676. Wyeth Incorporated. Improvements in or relating to the preparation of N-substituted, alpha, alpha-disubstituted derivatives of beta-phenyl ethylamine. Wherein isobutyrophenone is benzylated, then reacted with alkali metal amide or alcoholate, followed by alkali metal hypohalite, the product obtained on decomposition gives omega-phenyl-tertiary-butylamine which is alkylated on the nitrogen atom.

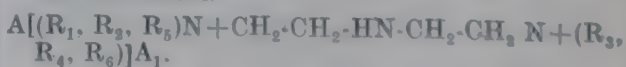
46677. J. J. Patel. Improvements in or relating to digesters for use in gas plants. Aerobic and anaerobic fermentations take place in two parts of the digester.

46678. Void.

FEBRUARY 9.

46679. Void.

46680. Ciba Limited. Process for the manufacture of new azapentylene-diammonium compounds. Process for making of secondary 3-aza-pentylene-(1:5)-ditrialkyl ammonium compounds, of the formula



46681. Ciba Limited. Manufacture of new piperidyl-alkyl-ketones. 1-alkyl-4-(3' : 4'-dialkoxy-phenyl) - piperidine-4-carboxylic acid derivatives, such as the nitrile, ester or a quaternary derivative thereof, are reacted with organo-metal compounds like alkyl magnesium halide

46682. Ciba Limited. Process for the manufacture of hydrazinophthalazines. A reactive functional nitrogen derivative of a benzene carboxylic acid, e.g. a nitrile, which contains in ortho-position a formyl residue or a functionally converted formyl residue is reacted with hydrazine.

46683. Dunlop Rubber Company Limited. Improvements in colour-printing processes. (February 14, 1951.) Applying coloured composition containing polyvinyl compound to halogenated rubber surface which is moist with volatile solvent for halogenated rubber and polyvinyl compound.

46684. Dunlop Rubber Company Limited. Improvements in the production of textile materials. (March 7, 1951.) Twisting to more than three turns per inch while they are still in the moist condition.

FEBRUARY 11.

46685. Shri Ram Institute for Industrial Research, and H. P. Das Gupta. Improvements in or relating to sulphuric acid manufacture. Reacting sodium sulphate and/or sodium bisulphate with HCl in presence of H_2SO_4 of at least 46% strength.

46686. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to the high-temperature cutting of alloy steels. (February 16, 1951.) An oxidisable adjuvant material in powder form comprising 1-50 per cent. by weight of silicon and 0-40 per cent. by weight of aluminium, the remainder being iron.

46687. Farbenfabriken Bayer. Wood preservatives. Liquid wood preservative containing an addition of halogenation product of an aromatic hydrocarbon having a plurality of non-condensed benzene nuclei.

46688. General Railway Signal Company. Improvements relating to block signalling system for single track railroads. Self restoring contact means at ends of block for designation of traffic directions, order of actuation of contact at stations respective ends serving to determine traffic direction.

46689. Y. Sivola. A manufacturing process for the production of pulp or cellulose. Comprises three main stages viz., the initial acid stages the intermediate stage involving a change and the final alkaline cooking stage.

46690. V. H. Fray. An improved method of and apparatus for manufacturing nuts for bolts or like. Feeding a metal strip through a press in which tapping holes are punched in the strip passing the strip in a tapping machine and then passing the strip from the tapping machine to a press for finally punching the nuts.

46691. Lowell Specialty Company. Spraying device. Including a telescoping member being adapted for air inlet, said air being compressed by a plunger, a siphon tube and a restricted passage.

46692. Smitsvonk N. V. Surface discharge spark plug for low tension and condenser discharge. Characterised in that one or more chambers are formed in the spark plug, in the side wall of which are located the operative parts of the electrodes near the mouth of the chamber or chambers.

46693. Cognated with the Application No. 46680. Dated February 9, 1952.

46694. Void.

FEBRUARY 12.

46695. Void.

46696. W. C. Carroll. Improvements in lip type lubricant seals for track tractor rollers. Consisting of an elastomer lip surrounding the shaft and angulated outwardly and lubrication unit through which lubricant extrudes.

46697. W. C. Carroll. Improvement in track tractor roller. Comprising a roller, non-rotating axle, a seal there between, bearing and large lubricant reservoirs with grooves to effect lubricant circulation by centrifugal pressure.

46698. W. C. Carroll. Self-contained bearing and lubrication unit. Comprising an axle, roller, a bearing, a cam actuated pump within the axle and lubrication passageways with check valves.

46699. Casablancas High Draft Company Limited. Improvements in or relating to drafting apparatus for textile fibres. (13th June 1951.) The endless belt loops carried at the rear ends on top and bottom drafting rollers are guided laterally and supported by separate upper and lower cradles riding respectively on the top and bottom drafting rollers.

46700. Standard Telephones and Cables Limited. Improvements in or relating to telephone signalling arrangements employing alternating currents. Station

- B has a source of signal current alternating current receiver, means for feeding station A which has a transmitter for signalling to B.
46701. J. Fey. Rotary cultivators for coupling to agricultural tractors. Comprising an outrigger arm for mounting a drive shaft and cutting roller shaft, which arm is pivotally connected to a tractor, a telescopic drive extending from the pivot, and a supporting device.
46702. H. Thoma. Suction device for a double-sided spinning machine. Collecting conduit consists of an outer cover having a uniform cross section throughout and conically tapering inner walls, connecting pipes of equal length being provided to outer cover.
46703. H. Thoma. Suction device for collecting and removing broken ends in spinning and the like machines. Knee-members permitting irrotational or non-vertical flow of the suction air current are inserted at the deflecting points of the flow.
46704. H. Thoma. Suction device for spinning machines for collecting and removing thread ends. A collecting conduit, suction heads projecting from the conduits and a filter box having an electric motor and fan wheel.
46705. H. Thoma. A suction apparatus for broken threads in spinning machines. The blower impeller with vertical shaft directly driven by the motor is provided in a blower box mounted on the creel and connected to the collecting channel.
46706. J.F.I. Ingvarlsen. A refrigeration unit. A temperature control conduit is connected between the condenser and a receiver.
46707. J. E. Kennedy. Disintegrating apparatus. Comprising revolving drum having charging and discharge openings at opposite ends, pneumatic means to force stream of air and material, and a discharge box to separate and disintegrated material.
46708. J. E. Kennedy. Disintegrating apparatus. Provision of a conveyor exterior of the drum for returning the coarse particles of material discharged through the discharge opening.
- FEBRUARY 13.
46709. Mechanical Products Inc. Improvements in or relating to electrical circuit breakers. Wherein a bimetallic latch which is in connection with fixed and movable contact means, has guide means associated therewith and adapted to adjust properly to locate the latch upon the abutment, with respect to changes in ambient temperature and predetermined current value at which the latch should function to break the circuit.
46710. Void.
46711. Void.
46712. Void.
46713. Council of Scientific and Industrial Research. Utilization of the seed oil of nim for the production of oleic acid, stearic acid, palmitic acid and/or 'stearin'. Splitting the glycerides contained in the oil by saponification of the oil.
46714. Council of Scientific and Industrial Research. A solvent extractor. Comprising a column having a central rotating shaft fitted with rotating scraper arms which sweep the curved plates provided in the column.
46715. Void.
46716. The General Electric Company Limited. Improvements in or relating to alloys. (February 14, 1951). Alloy of tungsten and nickel prepared by intermixing their powders so that particles of tungsten are surrounded by nickel, and sintering the compact at a temperature of 1400°C to 1600°C.
46717. Siemens Brothers & Co. Limited. Improvements relating to electric circuits including biased rectifiers. Rectifiers associated with resistance elements shunting one end of the attenuator, so arranged and proportioned that in conjunction with the impedances of the rectifiers, the shunting impedance at the other end of the attenuator and the output circuit, the input impedance looking at said one end is substantially same whether the attenuator is in the high loss or low loss condition.
46718. J. L. Backie. Telephone sterilizing equipment. The equipment has a container in which means are provided to direct ultra violet rays on the sound area of the equipment.
46719. Establishment Neyrpic. Improvements in dikes or jetties used in the sea. Water draining means are provided in the immediate back of a contact zone, the said means having discharge outlets on the sheltered side.
46720. American Car and Foundry Company. Method and apparatus for fabricating sheet metal railroad cars.

Fixing under frame onto wheeled trucks an assembly line tracks and other components applying and securing to under-frame by tack welding at different stations and continuously welding, from above, the components in rotatable frame-works.

46721. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to arc discharge tubes. Current supply members of all activated main electrodes and so far as an activated main electrode is connected to auxiliary electrode, also connecting member of these electrodes are provided with an electrically insulating envelope.

FEBRUARY 14.

46722. Void.

46723. Bisweswar Chatterjee. Apparatus for delivery of measured quantity of liquid by occultation of light rays. Wherein the light beam established under the delivery spout, when occulted, causes the operation of two stop cocks placed on each side of a vessel containing measured quantity of liquid, for discharge of liquid therefrom.

46724. C. Shunmugam. An improved production indicating device. (Addition to No. 41829.) Comprising a main chart fixed on a structural board, an indicator slidably and removably with a carrier frame, the indicator is provided with means for a slit scheme, indicator is also provided with a square slit on top corner corresponding to time scale to indicate the working date and also pre-planning, starting, trailing, driving and leading or critical row on the main chart in cooperation with the slit scheme.

46725. H. Morren. Method of making 1-benzhydryl-4-benzyl-piperazines and the products so produced. Reacting 1-aralkyl-piperazine with a halogenide of the other aralkyl in the presence of an acceptor or hydrohalogenic acid.

46726. Power Jets (Research & Development) Limited. Improvements relating to rotors for fluid flow machines such as turbines. (February 15, 1951.) Parts of rotor swept by hot gases made of highly resistant material, thermally insulated from and secured to one or both sides of massive rotor body of a less heat resistant material.

46727. Fuller Company. Improvements in or relating to kilns. The kiln has a drum body mounted for rotation about a longitudinal axis.

46728. American Cyanamid Company. Improvements relating to polymerizable and polymerized acrylonitrile compositions. (November 30, 1951.) Comprising acrylonitrile and one or more quaternary ammonium compounds.

46729. Void.

46730. Void.

46731. S. L. Mukherjee and Albert David Ltd. A process for the manufacture of quinoline derivatives. Diazotizing 7-chloro-4-(4'-aminoanilino) quinoline to get 7-Chloro-4-(4'-hydroxy-anilino) quinoline which is then treated with formaldehyde and diethylamine.

FEBRUARY 15.

46732. Void.

46733. W. E. Chamberlain. Improvements in or relating to tube-bending machines. (July 19, 1951.) Tube to be bent is laid against spaced abutments and the pressure is applied to the intermediate post of the tube by a hydraulic ram.

46734. The General Electric Company Limited. Improvements in channel terminating units for automatic telephone exchanges. (February 16, 1951.) Comprises means for applying impulses to a register a second input terminal, two gate devices, means for applying speech or other signals, from the first input terminal to the second input terminal.

46735. Alucrete Constructions Limited. Improvements in or relating to set expanded constructional cements and plasters. (February 16, 1951.) In which the expansion is effected in the presence of a small amount of a water soluble alcohol preferably methanol and ethanol.

46736. K. N. Ramaswamy. Tractors made from motor cars, buses and trucks. Tractor wheels driven on non rotatable axle mounted on a chassis and driven through sprocket wheels mounted in place of the conventional rear wheels of a motor vehicle.

FEBRUARY 16.

46737. The General Electric Company Limited. Improvements in or relating to electronic valve amplifiers. (March 1, 1951.) With a decoupling arrangement including impedance between decoupling points in two supply circuits between one valve electrode and common supply apparatus, the phase angles of the impedance between the coupling

point of second valve electrode circuit and the common supply apparatus, impedance between said decoupling points and the impedance, if any, between the decoupling point in the first valve electrode circuit and the common supply apparatus being approximately equal.

FEBRUARY 18.

46738. Demag - Elektrometallurgie. G.m.b.H. and Ganes Chandra Mitter. Method for refining coinage alloy to recover pure metals. Alloy is re-alloyed with additional copper, the resulting alloy subjected to copper electrolysis, the copper depositing at the cathode, the silver remaining chiefly as anode skeleton.

46739. Void.

46740. Dr. G. P. Kane and B. K. Kamat. A process for increasing the recovery of common salt from sea water. Wherein sulphates are removed by precipitation as calcium sulphate by adding calcium chloride to brine or bittern and the liquor concentrated.

46741. Elektrokemisk A/S. Improvements in or relating to supports for electrodes in electric furnaces. Contact pads around the electrode surface are surrounded by clamping ring and one or more elastic bags disposed between the pads and ring.

46742. Les Usines De Melle, Societe Anonyme. Improvements in production of unsaturated aliphatic aldehydes. A saturated aliphatic aldehyde is continuously introduced together with a condensation catalyst into the head of a distilling plate column heated at its base.

46743. L. T. Winger. Improved method of treating and of processing and canning whole sweet milk. Adding 35 per cent. H_2O_2 in pasteurized milk and dissipating the excess with powdered catalase enzyme and heating.

46744. Armstrong Siddeley Motors Limited. A flow check valve. (March 16, 1951.) Comprising a body containing a heat fusible member serving to hold a movable valve element clear of a hole in a valve seating.

46745. R. O. Blench. Improvements in or relating to the aromatisation of powders. (February 19, 1951.) Powder moves in contact with a continuous or intermittent stream of aroma laden inert gas.

46746. Ciba Limited. Process for the manufacture of new derivatives of the triterpene series. Triterpene derivative having a OH group on ring B is oxidised hydrogenated and the keto group removed to get new derivative of tetracyclic triterpene.

46747. Ciba Limited. Process for the manufacture of new dioxo-pyrrolidines. Converting 2-phenyl-2-pyridyl-butane-1:4-diacids into their cyclic imides.

46748. Void.

FEBRUARY 19.

46749. The General Electric Company Limited. Improvements in or relating to a method of soldering armature conductors to a commutator segment in a dynamo-electric machine. (February 20, 1951.) [Addition to No. 43589.] A commutator segment and parts of conductors extending beyond the riser heated by current passed through them and between two electrodes applied to the conductors and feeding soft solder to the joints.

46750. The General Electric Company Limited. Improvements in or relating to pulse signalling systems. (February 20, 1951.) Several pulse trains of recurrence frequencies $\frac{F}{a}$, $\frac{F}{b}$ etc., $\frac{a}{b}$ etc being different integers greater than unity and having no common factor, and pointing in time to a particular instant or succession of instants transmitted simultaneously over single path.

46751. The General Electric Company Limited. Improvements in or relating to pulse signalling systems. (April 9, 1951.) At least three monitoring means in apparatus fed with received pulse signal, respective pulse groups being determined by phasing means which is adjusted to cause supply of pulse groups with characteristic modulation to predetermined monitoring means.

46752. N. V. De Bataafsche Petroleum Maatschappij. Process for polymerizing olefinically unsaturated compounds in a two-phase system. Passing olefinically unsaturated compounds in gaseous state through a solution of an emulsifier in water in a stream of bubbles so that not more than 25 per cent. is absorbed.

46753. Automotive Products Company Limited. Improvements in or relating to power transmission systems including friction clutches. (February 20, 1951.) Engagement of clutch effected

at predetermined speed relation between driving and driven members under control of electric circuit controlled by load engaging and disengaging means of a clutch.

46754. Automotive Products Company Limited. Improvements in or relating to control mechanism for the transmission systems of motor vehicles. (February 20, 1951.) Servo devices controlled by gear changing member disengage friction clutches and limit opening of engine throttle during gear change, means for holding clutch disengaged and adjusting throttle and for permitting engagement of clutch on predetermined relative speed between clutch members.

46755. Imperial Chemical Industries Limited. Improvements in or relating to the dehydration of castor oil. Continuously passing castor oil and dehydration catalyst into a vessel, keeping the temperature at 260-375°C and withdrawing treated oil at such a rate as to maintain constant volume of liquid in the vessel.

46756. Heberlein & Co., A.G. Improvements in or relating to finishing processes for cotton fabrics. Immersing commercially bleached fabric in dry state in caustic soda solution of 10-20° Be., at temperature below 0°C and keeping it therein for 10-30 seconds.

46757. T.M.M. (Research) Limited. Improvements in textile drafting apparatus. (February 28, 1951.) Leading nose of the apron where it passes over the foremost apron guiding member is adjustable in position both with respect to its distance from the nip of drafting rollers, plane containing the next following drafting rollers and the nip of the apron driving roller.

46758. Ingersoll Limited. Improvements in key operated lock mechanism. (February 19, 1951.) Key holes are laterally spaced apart an amount such that the key when inserted from either end will operate same set of levers.

46759. Ciba Limited. Process for the manufacture of new indolines. Converting the hydroxy group which is a substituent in the benzene nucleus of the indoline, to a carbamyloxy group.

46760. Void.

46761. Void.

46762. Firma Gebruder Eberhardt. Improvements in agricultural implements or machines, particularly disk ploughs

and the like. Each disc is arranged to rotate on a shaft within a bearing which is mounted on a carrier and adapted to be turned and fixed thereon about its axis which latter forms an angle with the axis of the disk.

FEBRUARY 20.

46763. Toledo Scale Company. Improvements in a weighing scale. Computed value weighing scale with printing mechanism has juxtaposed weight printing type and value printing type which latter is on members settable by operator.

46764. Carlo Erba S.p.A. Process for the production of chloramphenicol. (August 17, 1951.) By condensing aromatic aldehydes with glycine, reducing the acid obtained to alcohol, which is then acylated with dichloroacetic acid derivatives.

FEBRUARY 21.

46765. Void.

46766. Void.

46767. S. L. Mukherjee and Albert David Ltd. A process for the preparation of quinoline derivatives and the intermediates for their preparation. Treating 7-chloro-4-(4-hydroxy anilino) quinoline with diethylamino, formaldehyde in isopropyl alcohol.

46768. British Telecommunications Research Limited. Improvements in and relating to electric wave distorting networks. (February 22, 1951.) Comprising a capacitor connected in series with a resistor to input terminals of the network, a switching device responsive to voltage across the capacitor exceeding an amount in one sense to become switched on and an amount in the other sense to become switched off and a further switching device applying and removing a short-circuit across a part of said resistor.

46769. British Telecommunications Research Limited. Improvements in and relating to apparatus for converting varying uni-directional voltage into alternating voltage. (February 22, 1951.) Comprising a capacitor and a rectifier device connected in series between input terminals, a resistive device across the capacitor, an output terminal connected to a point in the resistive device and another output terminal connected to the terminal of the rectifier device remote from the capacitor.

46770. The General Electric Company Limited. Improvements in electric switching circuits including gas-filled discharge valves. (February 22, 1951.) Having their cathodes (or anodes) and grids connected respectively in parallel, said cathode (or anode) circuits being completed to one pole of source of potential via a single impedance, anode (or cathode) circuits being completed to the other pole through an electromagnetic switch.
46771. The General Electric Company Limited. Improvements in or relating to vibratory conveyors and the like. (February 22, 1951.) Comprising a resilient mounting for the support for the material to be conveyed, which permits oscillation of the support in a direction forming acute angle with the direction of movement of the material and electromagnetic means for imparting oscillatory motion to the support.
46772. Perfogit Societa Per Azioni. Method and apparatus for the drawing or stretching of filaments and bundles of filaments of textile fibres. Leading the filaments after feeding and before drawing through a friction device comprising snubbing surfaces having a frictional contact with the filaments.
46773. American Cyanamid Company. Improvements relating to method of and machine for forming and filling packages with powdered material. (May 11, 1951.) Feeding downwardly a continuous packing sheet folding and adhering one side of it to itself by heat and pressure so as to form an open-ended bag, filling a charge of powder into said bag and sealing the mouth of the bag by heat and pressure.
46774. American Cyanamid Company. Improvements relating to the production of shaped products from acrylonitrile polymerization products. (January 2, 1952.) [Addition to No. 40930.] Extruding a water-coagulable solution of the polymerisation product in an aqueous coagulant containing 3 to 25% of thiocyanate at a temperature not above 10°C wherein prior to extrusion the polymerisation product is dissolved in a concentrated aqueous solution of the same water soluble thiocyanate.
46775. A. V. Reddi. Improvements in or relating to tobacco drying and conditioning machines. A trough draws the air supplied to leaves and feeds it to the suction end of the fan.
46776. A. V. Reddi. Mechanised tobacco curing barn and an improved method of curing tobacco in it. Tobacco leaves are hung on rungs carried between a pair of endless chain in an enclosed chamber.
46777. Sharp & Dohme, Incorporated. Process for the preparation of cyclohexyl methyl ketones and the compounds thus produced. Hexahydrophthalic anhydride is reacted with alkoxyphenyl compound, the compound so formed is catalytically hydrogenated by high pressure, treated with acid chloride, converted to the diazoketone and then hydrolyzed.
46778. Saint Freres, Societe Anonyme. Current-supply means for weft stop motions. The weft stop motion being itself connected to a pair of resilient brushes partaking of the rotation of the shuttle and adapted to frictionally engage the dents in the reed.
46779. Saint Freres, Societe Anonyme. Warp crossing means for circular weaving looms. Crossing of warp threads between the funnel and a hindrance being delayed by a hindrance interdependent on the rotation of the shuttle.

FEBRUARY 23.

46780. E. K. Cole Limited. Negative feedback and tone control in audio frequency amplifiers. (March 7, 1951.) In which cathode voltage of output valve follows that of its control grid at audio frequencies and tone control effected by negative feed back network, comprising two parallel branches each having reactive and resistive elements, connected between the cathode of the output valve and control grid of the preceding valve feeding the output valve.
46781. The General Electric Company Limited. Improvements in or relating to alloys. Comprising 62.5 per cent. to 90 per cent. tungsten and/or molybdenum, 1 per cent. to 22.5 per cent. of chromium, 5 per cent. to 10 per cent. of nickel and 0 to 5 per cent. of copper.

46782. Josef Meissner. Process for manufacture of hexamethylenetetramine. By reacting ammonia and formaldehyde at boiling point of mixture so that heat of reaction effects evaporation.

FEBRUARY 25.

46783. Henschel & Sohn, G.M.B.H. Safety valve with spring loading. Valve disc is operated piston-like within the

valve body and is provided with spherical seating surfaces, the piston-like part of the valve disc situated above the valve seat having outlets 9 and a throttle member with obliquely arranged outlets is arranged above the valve disc and secured to it as by screw thread.

46784. Elektrokemisk A/S. Improvements relating to holders for carbon electrodes in electric furnaces. Comprising a carbon electrode having a tubular sleeve with a gap and a tightening assembly to draw the opposed edges of the sleeve together at the gap to tighten the holder.

46785. British Insulated Callender's Cables Limited. Improvements in the manufacture of electric cables. (March 21, 1951.) [Addition to No. 34038.] The impregnant used comprises a micro-crystalline petroleum wax having a melting point of about 88°C and needle penetration values of about 5 at 25°C and about 35 at 70°C.

46786. T.M.M. (Research) Limited. Improved means for supporting and loading the top rollers of textile drafting apparatus. (March 1, 1951.) The upper rollers being mounted at their arbors in a common supporting arm pivoted in the machine frame, the supporting arm having a pivoted abutment engaging a rigid abutment.

FEBRUARY 26.

46787. The General Electric Company Limited. Improvements in or relating to electric pulse signalling systems. (February 27, 1951.) Wherein there is arranged periodically to be transmitted in place of the pulse elements carrying intelligence, a synchronising signal consisting of remaining pulse elements of the transmitted signals, the receiver having synchronising means responsive to characteristic pulse pattern of received signal.

46788. Hispano-Suiza (Suisse) S.A. Improvements in spinning frames having their spindles driven through worm and worm wheel gears, and in particular to cotton spinning frames. The vertical plane of the driving shaft axis coinciding with the plane of symmetry of the framework.

46789. Hispano-Suiza (Suisse) S.A. Improvements in liquid lifting devices, in particular to achieve an upward lubricant circulation in spinning spindles. The lower end of a rotating tube having

a vertical axis is immersed in an oil bath and is surrounded by a fixed cup-shaped part the bottom of which is provided with a hole located opposite the bore of the tube.

46790. Telephone Manufacturing Company Limited. An improved method of and means for manufacturing electrical contact springs. (March 9, 1951.) Comprises means for locating the springs, means for engaging the springs individually and means for engaging and bending the springs in alternate directions.

46791. The Wellcome Foundation Limited. Improvements in derivatives of pyrimidine. (April 16, 1951.) [Addition to No. 45685.] Condensing α -phenyl- β -alkoxy- β -alkylacrylonitrile with guanine.

FEBRUARY 27.

46792. Void.

46793. Council of Scientific and Industrial Research. Improvements in or relating to solvent extraction of oleaginous materials. Extracting by solvent above its critical solution temperature and cooling liquid extract to cause phase separation and recovering oil.

46794. Council of Scientific and Industrial Research. Improvements in or relating to starch manufacture. Disintegrating banana stems and separating by tabling or cloth filtration.

46795. Void.

46796. Void.

46797. S. L. Mukherjee, and Albert David Ltd. A process for the manufacture of calcium salt of para-amino-salicylic acid. Reacting P. amino-salicylic acid or its sodium salt with calcium salt.

46798. Les Vehicules guides sur Pneumatiques. Control system for regulating the speed of vehicles. Comprising the provision along the route of sections of transmitter cable traversed by electric current and placed in two staggered lines on alternate sides, two receivers in the vehicle energized by said cable sections controlling speed varying means.

46799. Mavor & Coulson Limited. Improvements relating to mining machines. An auxiliary hydraulic cylinder-and-ram unit is interposed between the projecting cutter and the cutter head and is under the control of a valve.

46800. South Anchor Jute Works (Dundee) Limited, and H. S. Cargill. Weft detector device for weaving looms. A bracket located near one end of the slay and operatively connected to the stop motion of the loom, a bar clamped in the said bracket and supporting a bell-crank lever responsible to detect the weft.

FEBRUARY 28.

46801. Void.

46802. Pacific Mills. Process for setting wool fabrics. Impregnating the fabric with aqueous solution of pH 9 to 12 and generating steam in the interior of the wet fabric.

46803. K. N. H. Corporation. Moulding compositions prepared from cashew nut oils and methods of making the same. Composition with cashew shell as the filler is made by reacting *in situ*, the oil distributed uniformly in the shell with formaldehyde in the presence of a catalyst at 80-300°C.

46804. American Cyanamid Company. Improvements relating to the preparation of substituted quinazolones. (May 7, 1951.) Reacting the corresponding tetrahydro compound with hydrogen in presence of a catalyst and in a solvent containing a non-oxidising acid.

46805. American Cyanamid Company. Improvements relating to the formation of solutions of polymerized vinyl compounds. (January 2, 1952.) Dispersing the polymer in water containing an amount of salt insufficient to yield a solution that will dissolve the polymer, and adding to the dispersion an additional amount of the same salt.

46806. Koppers Company, Inc. Improvements in or relating to coking retort ovens. Having joint-intercepting plates interposed in a horizontal plane in masonry between the bottoms of regenerator sole channels and tops of waste gas circulation ducts.

46807. C. A. Parsons & Company Limited. Improvements in and relating to combustion turbine plants. Plant suitable for motor road vehicles including air filter, single stage centrifugal compressor, centripetal turbine and a combustion chamber.

46808. C. A. Parsons & Company Limited. Improvements in and relating to combustion turbine plants. The compression system comprises a main compressor which is axial radial and or

supplementary compressor which is radial only driven at speeds to obtain pressure ratio not greater than 4.

46809. C. A. Parsons & Company Limited. Improvements in and relating to combustion turbine plants. Radial combustion chamber forms a flywheel type of plant.

46810. Standard Telephones and Cables Limited. Inter-communication system. Comprises a switching control centre common to all the lines, means for generating electric channels, means for associating any of the channels with any free line.

46811. Pressed Steel Car Company Inc. Improvements in refrigeration system for vehicle body and method therefor. The body has outer and inner shells defining the storage space.

FEBRUARY 29.

46812. A Sanghi. Improvements in or relating to tube-wells. Wherein a strainer is provided in the water bearing sand strata forming the cavity.

46813. The General Electric Company Limited. Improvements in or relating to voltage breakdown devices (March 1, 1951.) Glass tube filled with ionisable gas with internally spaced sealing members.

46814. Wingfoot Corporation. Improvements in self-energizing single disc brake. Brake arms disposed on opposite sides of a rotary disc and articulated to the stationary member.

46815. Dunlop Rubber Company Limited. Apparatus for successively feeding flanged-stem articles from a magazine into a holder. (March 6, 1951.) Comprising a magazine having equispaced orifices each having a flexible diaphragm and means for moving the magazine to bring each orifice to register with corresponding receptacle in a holder.

MARCH 1.

46816. The Director of Technical Development, M.G.O. Branch, Army Headquarters, New Delhi. Improvements in or relating to composition and manufacture of greases for use over a wide range of temperature. Dispersing mixed sodium and calcium soap of fatty acids in mineral oil having low cold test.

MARCH 3.

46817. R. Krishnamurthi. Improved agricultural waterlift. Consisting a driving wheel in gear connection with a small toothed wheel carrying on its own spindle differential axles or drums one stout and the other small.
46818. Standard Telephones and Cables Limited. Improvements in or relating to telegraph receivers. (March 2, 1951.) Comprising means for deriving a first voltage wave from the received signal, means for producing a second voltage wave of polarity opposite to that of the first wave and of amplitude equal to that of the first wave in the absence of frequency variations and means for adding both waves to produce a control wave to adjust the tuning of the receiver.
46819. W. F. Tipping. Improvements in or relating to electric water heaters. (March 1, 1951.) Comprises a water-container means controlling flow of water, heating element switch operated by flow of water through container.
46820. Director, Technical Development, M.G.O. Branch, Army Headquarters, New Delhi. Improvements in or relating to incandescent lamps. Characterised in that oil container is fitted with a mechanical device enabling working fuel to preheat the vaporiser and a full cut off valve at the bottom of the vaporiser.
46821. The Director, Technical Development, M.G.O. Branch, Army Headquarters, New Delhi. Improvements in or relating to water displacing compositions for drying and/or preservation of metal stores. Containing fatty acid nitriles, organic soap and oil preservative, all dissolved in a solvent.
46822. J. T. Smith. Improvements in and relating to shock absorbers. (March 2, 1951.) Rubber buffer disposed between two parts which define a housing for it with means providing a degree of damping in one direction greater than in opposite direction.
46823. The English Electric Company Limited. Improvements relating to electrically propelled vehicles. (March 16, 1951.) Axle hung electric driving motor supported at one side of it on suspension bearings journalled on the vehicle axle and on the other side on the vehicle bogie.
46824. Void.
46825. G. T. Fillery. Improvements in or relating to combined suction cleaner and floor polisher. (March 14, 1951.) Means for keeping the polishing element on the floor position when the suction nozzle is in off the floor position and *vice versa*.
46826. Aktiebolaget Akers Styckebruk. An improved method of producing tubular bodies by centrifugal casting. (June 26, 1951.) Lining material being made up of porous and fire-proof material together with an adhesive like bentonite or clay.
46827. Diamond Blower Company Limited. Mechanism for transmitting from a rotary driving member successive linear and rotary motion to a driven member, particularly for soot blowers. Rotary driving member is threaded, on rotation it moves axially a screw, but screw is held from rotation by coupling element connecting to a stationary part of coupling elements moves automatically out of coupling relation with the stationary part and couples the driving member to the driven member, thereby the screw also rotates.
46828. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Isonicotinic acid derivatives and method of producing same. By reacting isonicotinic acid hydrazide with a carbonyl compound.
46829. Ciba Limited. Process for the manufacture of hydroxyl compounds of the steroid series. Isomerising or hydrolysing 7: 11-dihydroxy 8: 9-oxido steroids and dehydrating 7:8:9: 11-tetrahydroxy steroids obtained to 7-keto 9: 11-dihydroxy steroids.
46830. H. Kater. Medical syringe. Ground face of flange at one end of cylindrical tube is sealed by pressing a circular base piece through screw joint.
46831. Void.
46832. Ciba Limited. Process for the manufacture of new carbamic acid esters. Reacting R_1R_2 : C (C:CH) OH carbinols with isocyanate R_3NCO to form R_1R_2 : C (C₁CH₃)O.CO.NHR₃—where R_1R_2 are monovalent or divalent aliphatic or cycloaliphatic hydrocarbon residues and R_3 is aliphatic residue.

MARCH 4.

46833. Babcock & Wilcox Limited. Improvements in or relating to fuel delivery means for mechanical stokers. (March 5, 1951.) Means for delivering fuel to dividing means to effect delivery of similar streams of fuel to a plurality of stationary chutes.

46834. The General Electric Company Limited. Improvements in or relating to refractory materials. (March 5, 1951.) Consisting crystals of mullite zircon, zirconia and a siliceous vitreous matrix with which the said crystals are bonded.

46835. E. Munekata. The process of manufacturing a high grade combination fertilizer with low hygroscopicity. Treating rock phosphate with nitric acid, treating the product with ammonia, transforming soluble calcium salts into slightly soluble salts and concentrating the products.

46836. Naamlouze Vennootschap P. F. Van Vlissingen & Co's Katoenfabrieken. Apparatus for the treatment of fabric, such as washing. Freely rotating lower rollers and driven top rollers, the top rollers having conical surface.

46837. The Hercules Cycle & Motor Company Limited. Improvements in and relating to internal combustion power units for vehicles normally propelled by human power. [Divided out of No. 43854; Ante-dated to October 3, 1950.] Means provided for immobilising the crank-shaft in an engine with rotative crankcase and cylinder and stationary crankshaft.

MARCH 5.

46838. R. N. Bhattacharji. Improvements in or relating to radio sets. Wherein all components excepting controlling gears, dials, vibrators, speaker and resistances or valves which develop high temperature are immersed in thin mineral oil.

46839. British Insulated Callender's Cables Limited. Improvements in and relating to electric cables. (March 20, 1951.) Helically arranged strip is divided into radial projections by slots parallel with the axis of the central conductor.

46840. Tecalemit Limited. Improvements in or relating to lubricant compressors and means for filling the same with

lubricant. (November 21, 1951.) Comprises lubricant pump in the container and a scraper carried by the detachable cover.

46841. Void.

46842. Standard Telephones and Cables Limited. Improvements in or relating to automatic telecommunication exchange system. (April 6, 1951.) Comprises a group of register controllers and a common register translator and electronic interconnecting means.

46843. E. Krusius. An improved method of producing scissors, and scissors produced by such method. Cold shaping of a rough shape of scissor cut or stamped out from a rolled material.

46844. E. Krusius. Improvements in or relating to grinding wheels and the grinding of cutlery. Grinding wheels have adjacent zones of different grain size.

46845. The British Bata Shoe Company Limited. Improvements in the manufacture of shoes and the like. A mould having relatively movable parts, the parts forming an interior which receives vulcanisable material.

MARCH 6.

46846. Void.

46847. Westinghouse Brake & Signal Company Limited. Improvements relating to mechanical transmission mechanism. (March 7, 1951.) Ends of lever to which actuator and actuated member are coupled constrained to move in predetermined paths; at end of first part of actuator stock lever becomes parallel to initial position and then pivots about one end.

46848. Vereinigte Kugellagerfabriken Aktiengesellschaft. Top weighting rollers for drawing mechanisms of spinning machines. Top roll members form directly or indirectly with the bearing housing surface a very narrow and short sealing gap with expanded hollow space.

46849. Parke, Davis & Company. Antibiotic and methods of obtaining same. Inoculating nutrient medium with streptomyces viridosporus and incubating inoculated medium under aerobic conditions.

46850. Union Carbide and Carbon Corporation. Self-induced magnetic field controlled gas shielded-arc welding process and apparatus. (January 24, 1952.)

Comprising a gas-shielded arc welding torch including an electrode supported within a nozzle and a split ring of magnetizable material which is mounted on the gas outlet end of the nozzle.

46851. Imhausen & Co. G.m.b.H. Process for the manufacture of drug solutions. Dissolving the drug in esters of fatty acids with 7-14 C-atoms in the unbranched chain.

MARCH 7.

46852. Roneo Limited. Improved method for producing copying stencils. (March 8, 1951.) Comprising scanning the original by light spot in conjunction with a photo cell, scanning the stencil sheet in synchronism with the original by moving the stencil sheet relative to an electrode of a spark gap passing current through the stencil sheet.

46853. The British Iron and Steel Research Association. Improved process for the production of metals in elongated form. (March 7, 1951.) Passing a core of metal in elongated form through a hot bath of molten metal.

46854. H. E. Gleed. Cropping and pruning machine. An arm, carrying cutting tools, is rotatable about a fixed post.

MARCH 8.

46855. Void.

46856. Deutsche Gold-Und Silber-Scheidanstalt, vormals Roessler. Process for the production of natural or artificial rubber or other elastomers of improved strength. (January 4, 1952.) Mixing with filler produced by reacting a silicate with an acid to convert it into soluble salt.

MARCH 10.

46857. Council of Scientific and Industrial Research. Cation exchange resins. Adding resinifying agent such as sulphuric acid or formaldehyde to cashew nut shell liquid, heating the gel obtained and sulphonating it.

46858. Void.

46859. Void.

46860. Kapil Muni Dev. A starter for re-use of unserviceable fluorescent tube lights. A condenser in series with a make and break switch is connected across the tube, each of the filamentary electrodes being provided with short-circuit connections.

46861. A. V. Reddi. Improved method of stringing tobacco for curing. Stems of the tobacco leaves are placed between the turns of a helical extension spring, the compressive force of said spring trying to resume its original shape or form.

46862. Void.

46863. Void.

46864. Ciba Limited. Process for the manufacture of hydrazinophthalazines. Reacting functional biscarboxyl derivative of benzene-o-dicarboxylic acid with hydrazine.

46865. Thorn Electrical Industries Limited. Improvements in luminescent materials. (March 12, 1951.) Heating together starting materials such that the resulting material comprises pyrophosphates of bivalent metal calcium and one or more of magnesium, strontium, barium or zinc activated with tin or tin and manganese, the tin being not less than 0.05 per cent, the molecular ratio of metal oxide (excluding tin activator) to phosphorous pentoxide is between 2:0.9 and 2:1.4 and calcium not more than 98 molecular per cent of the total bivalent metal (excluding activators).

46866. Imperial Chemical Industries Limited. Dyestuff compositions. Comprising one or more dyestuffs which contain isothiuronium salt groups attached through methylene linkages to aromatic nuclei and one or more acidic substances.

46867. Titan Pty. Limited. Improved method of and machine for, separating membranes of animal intestines. Treating a runner including the step of rupturing for at least part of the circumference of the runner, the fibrous tissue connecting the inner and outer membranes.

46868. The Leeds & Bradford Boiler Company Limited and H. M. H. Pickard. Improvements relating to doors or covers for pressure vessels. A valve which supplies fluid to the interior of vessel is opened when the door is fully locked.

46869. Deutsche Gold-Und Silber-Scheidanstalt, vormals Roessler. Process for the production of finely divided silica. (January 4, 1952.) Reacting a solution of an alkali metal silicate with an acid solution of a metal salt of the second, third or fourth group of the periodic system.

MARCH 12.

46870. Societe Des Usines Chimiques Rhone Poulenc. Improvements in or relating to the production of the hydroperoxides of cumene and its homologues. (January 18, 1952.) Oxidising cumene and homologous hydrocarbons by means of oxygen in presence of alkali metal or alkaline earth metal formate, oxalate or benzoate.

46871. Void.

46872. Dunlop Rubber Company Limited. Improvements in compounding rubber and articles obtained thereby. Incorporating lignin and a methylene donor in rubber and heating.

46873. The Dorr Company. Apparatus for and method of controlling the flow of finely-divided solids. Material is fed by gravity to an outlet material.

46874. H. W. Burrington. Improvements in liquid fuel injection equipment for internal combustion engines. Opening of fuel needle valve resisted and slowed down by dashpot, in addition to spring loading, causing fuel injection at a rate slow at first and then rising.

46875. Burn & Company Limited, and D. R. Subramanian Iyer. Improvements in or relating to the manufacture of refractory and heat-insulating compositions and articles. Comprising a fired mass containing paddy husk ash bound with lime.

46876. Boxfoldia Limited. A new or improved carton for containing electric lamp bulbs and like fragile articles. Wherein the two non-adjacent flaps at one end are each provided with two internal fold lines disposed at an angle substantially greater than 45° to adjacent connecting fold line.

46877. Boxfoldia Limited. Improvements in or relating to folding cartons and blanks for making the same. Wherein the inner panels of the sections are of such a dimension that the inner panel of the intermediate section is held by the adjacent inner edge section panels, out of engagement with the outer panel thereof.

46878. G. I. M. Porter. An improved power operated mowing machine. (March 12, 1951.) Plurality of rotary cutters supported along a boom, are drawn along at right angles to the path of the tractor or in tandem therewith.

46879. Ciba Limited. Process for the manufacture of new azacycloalkanes. 3-Aryl-3-pyridyl-mono-oxo-azacycloalkanes are prepared by treating (a) aryl-pyridyl-substituted alkanes having nitrile and carboxyl groups (b) 3-phenyl-3-pyridyl-oxo-thioketo-azacycloalkanes, with Raney nickel and hydrogen and if necessary also ammonia, to form the configuration-CO-NR-CH₂-of a cyclic lactam.

46880. Ciba Limited. Manufacture of acid amide derivatives of azo compounds. Halide of a carboxylic acid is reacted with a non-volatile amine.

MARCH 13.

46881. Void.

46882. The General Electric Company Limited. Improvements in or relating to lighting fittings. (March 14, 1951.) Comprising upper and lower plates, means to form watertight joint, cover supported by ribs.

46883. Parker-Knoll Limited. Improvements in or relating to the spring upholstery of furniture. (March 27, 1951.) Parts of a wire from the outwardly directed face of a frame enter into recesses formed in the inward face of frame for connection with ends of springs.

46884. E. Haas. Improvements in containers intended for holding and individually dispensing tablets or the like. An ejector device arranged in the vicinity of the upper end of the container which also comprises an inner part which guides the base part and an outer part slidably fitted over the inner part.

46885. Etablissements NEYRPIC. Improvements in hydraulic turbine installations. Automatically operated safety gate arranged beyond turbine and a safety flashboard for draining the turbine dry arranged ahead of it.

46886. K. Ruetz. Improvements in or relating to closure devices for containers. Having a slide sliding in two guide grooves disposed laterally on the container head and a closure members having pressure points one at the front of the middle axis of the mouth aperture and the other at the other behind the middle axis.

46887. Patentes Talgo, S. A. Improvements in or relating to articulated railway vehicles. (February 14, 1955.)

Combination of articulated body and rigid sections with a linkage connecting the axle with adjacent rigid sections.

MARCH 14.

46888. Void.

46889. Elektrokemisk A/S. Improvements relating to the calcination of anthracite and like material. Calcining anthracite by preheating a charge of anthracite and passing electric current through the preheated charge to complete calcination.

46890. N. P. S. Straussler. Improvements in or relating to pneumatic tyres. Low pressure tyre comprising a carcass of vulcanised rubber with a tread of barrel or segmental arch form in cross section without free side walls and the margins each held against radial and lateral movement to a supporting rim and subject to air in a chamber formed by the rim and the carcass or in a tube supported on the rim.

46891. Diamond Blower Company Limited. Improvements in or relating to boiler cleaning and like apparatus. Admission of fluid to the nozzle tube is controlled by a ported valve member co-operating with a port associated with the tube, and the valve member is displaceable longitudinally for interruption of fluid.

46892. Aktiebolaget Svenska Kullager Fabriken. Adoption of anti-friction bearing to standard freight car truck specification. End covers secured respectively against opposite ends of outer race ring forming a unitary cartridge embracing the elements of the bearing.

46893. Imperial Chemical Industries Limited. Production of new esters of phosphoric acid. Treating para-tertiary-octyl-aryloxy-phosphoryl dihalide with a primary monohydric aliphatic alcohol containing 4 to 12 carbon atoms and with a primary monohydric aliphatic alcohol having 1 to 12 carbon atoms.

46894. Oesterreichisch-Alpine Montangesellschaft. Process for refining pig iron. Oxidising gases are blown on bath surface and the pressures of the blast jet on the bath surface is kept below 0.75 Kg/sq. cm.

46895. Oesterreichisch-Alpine Montangesellschaft. Process for refining pig iron in a converter. Cubic capacity of converter per metric ton of metal charged is kept below 0.9 cubic meters.

MARCH 15.

46896. Void.

46897. North Thames Gas Board. Improvements in or relating to the purification of hydrogen sulphide. (March 27, 1951.) Reacting the gas mixture with water vapour at temperatures between 150°C and 500°C in presence of a contact catalyst.

46898. G. Lindwall. Barrels. A cylindrical hollow shell, a closure for each of its ends, the closure including a plane-disc like head, a split wedge hoop and means to expand said hoop.

46899. Imperial Chemical Industries Limited. Improvements in or relating to gelatine blasting explosives containing crystalline salts. (June 18, 1951.) Including a tri-ester of ortho-phosphoric acid wherein one radical is para-tertiary-octyl-aryl group and other two are alkyl groups with upto 12 carbon atoms.

MARCH 17.

46900. Void.

46901. Anur Krishnamachar Doraiswami. Improved frame for writing slates or the like. The frame is embossed to form one or several ribs, ridges corrugations running all along the frame on both sides of the slate slab.

46902. Calor-Emag Elektrizitats-Aktiengesellschaft. Improvements in devices for switching electric currents. Wherein by the circuit breaking motion of the extinguishing agent is passed from a first chamber into a second chamber put under pressure and passed to a third chamber of low pressure.

46903. Parke, Davis & Company. Antibiotics and methods for obtaining same. Inoculating nutrient medium with *Streptomyces* C1730 and cultivating inoculated medium under aerobic conditions at a temperature of about 20 to 40°C.

46904. Monsanto Chemical Company. Improvements in or relating to soil conditioning and benefiting agents, stabilized soil employing said agents and method of conditioning soil. Comprises a polymeric water-soluble poly-electrolyte having an average molecular weight of at least 10,000 and a linear continuous carbon chain derived by the polymerisation of an aliphatic unsaturated group.

46905. Monsanto Chemical Company. Improvements in or relating to soil

conditioning agents and methods of preparing the same. Comprises a mixture of copolymer of vinyl acetate and a partial ester of maleic acid and a solid calcium compound.

46906. Monsanto Chemical Company. Improvements in or relating to hydrolyzed polymers and soil-conditioning agents comprising or containing said polymers. Suspending finely divided polymer in a mixture of water and alcohol in presence of alkali metal hydroxide and heating the suspension to a temperature above 40°C.

46907. Chicago Pump Company. Diffusers. Diffuser has a rigid non-porous elongated lower body portion and a collapsible upper portion.

46908. Ciba Limited. Process for the manufacture of alicyclic hydroxyketones. (April 16, 1951.) By treating alicyclic 2:3-oxido-ketones containing in the 2-position an aliphatic residue with reducing agents.

46909. Wuerth. Spindelfabric G.m.b.H. Tension or guide pulleys, especially for the tape drives of textile spindles and the like. The pulley carrier being detachably secured to the bearing housing of the pulley by two fastening means positioned parallel to and symmetrical about the pulley axis.

46910. Dr. Ing Carl Kreutzer. Improvements relating to metallurgical furnaces. Comprising ribbed arch having both longitudinal and transverse ribs between which box like compartments are formed.

MARCH 18.

46911. Dunlop Rubber Company Limited. Treatment of rubber surfaces. (March 30, 1951.) Subjecting to the action of a chlorite solution.

46912. Power Jets (Research & Development) Limited. Improvements in apparatus and method for the combustion of a mixture of fuel and air of low calorific value. (March 19, 1951.) Auxiliary fuel is supplied at such a rate that the temperature falls gradually but does not go below a predetermined value.

46913. Ferro Corporation. Improvements relating to porcelain enamelling. (December 20, 1951.) Roughened steel immersed in a nickel bath containing a reducing agent until there is a deposit of 0.04 to 0.25 gms/sq. ft. apply the

enamel coating and finally firing the same.

46914. The Lincoln Electric Company. Improvements in or relating to electric arc welding and flux composition for use therein. Comprising minor content of reacting metal silicate and a major content of reacting metal aluminate, intermixed in finely ground condition.

46915. Vilsicol Corporation. Process for preparing new compounds, the compounds so prepared and pesticides containing said compounds. Reacting imide derivative of the Diels-Alder adduct of hexachlorocyclopentadiene and maleic anhydride, with metal hydroxide and reacting the N-metal derivative with R Hg X.

46916. Societe De La Pile Leclanche. Improvements in or relating to batteries. Dry cells depolarised by the oxygen of the air consisting of a pile of flat elements whose faces closed by waterproof insulating material.

46917. S. Simpson Limited. Improvements in ladies' skirts. In which the waist band is formed with fastening means for engagement with a length or lengths of elastic webbing extending through a tunnel or loops in the waist band.

MARCH 19.

46918. Void.

46919. Anstalt Fur Die Entwicklung Von Erfindungen Und Gewerblichen Anwendungen "ENERGA". Improvements in or relating to grenades. Of the type comprising an explosive charge, a detonator, means for transmitting fire to the detonator and a tubular stabilising tail fixed by an intermediate member behind the body of the grenade, detonator partly housed in a hollow provided in the intermediate member.

46920. Anstalt Fur Die Entwicklung Von Erfindungen Und Gewerblichen Anwendungen "ENERGA". Firing device for rifle grenades. Of the type comprising a sleeve adapted to be fitted to the end of the barrel, said device consisting of a sight articulated on the body of the sleeve and adapted to fold over the latter.

46921. The General Electric Company Limited. Improvements in or relating to domed refractors. (March 20, 1951.) Domed refractor having a smooth interior shape, annular lenticular portion

and at least one annular prismatic portion.

46922. Imperial Chemical Industries Limited. Improved process for the production of yarns, filaments, films and the like. (April 6, 1951.) The molten organic material is supplied by a horizontal screw to a positive metering pump for pumping through spinneret wherein the rate of pumping by positive pump is not greater than the maximum discharge rate of the molten material by said screw.

46923. The English Electric Company Limited. Improvements relating to braking systems for hoists and the like. (April 5, 1951.) Means responsive to the direction of rotation of the hoist modifies rate of brake application.

46924. The British Tabulating Machine Company Limited. Improvements in methods of making data-bearing records and apparatus for sensing the same. (May 11, 1951.) Comprises means for uniformly magnetising the marks and a magnetic head or heads for sensing the magnetised marks.

46925. Scammell Lorries Limited. Improvements in and relating to retracting struts or members. (March 27, 1951.) Which is moved to an withdraw from its extended position by fluid actuated means and in the extended position the load is sustained by independent mechanical means.

MARCH 20.

46926. Alan Muntz & Company Limited. Improvements in and relating to turbines operated by free-piston gas generators. (March 21, 1951.) Setting of nozzle blades of inward radial flow turbine automatically varied in dependence of pressure of gas supplied from generator so that nozzle area is increased with reduction pressure over a range of relatively low pressure.

46927. Ruhrchemie Aktiengesellschaft. Improvements in or relating to the OXO synthesis reaction. Subjecting carbon monoxide, hydrogen and an aliphatic unsaturated organic compound to OXO synthesis reaction in the presence of a surface tension reducing agent which stable under the reaction conditions.

46928. A. J. A. Asplund. Method and apparatus in the manufacture of pulp from fibrous ligno-cellulose containing materials. Prior to long time treatment

in the heat, the ligno-cellulose material is impregnated with chemicals having a neutralising effect on organic acids formed under the heating of the materials.

46929. The Dow Chemical Company. Improvements in or relating to thermoplastic compositions of water-soluble cellulose ethers. Comprises 43 to 60 per cent. of water-soluble non-thermoplastic cellulose, 26 to 45 per cent. of propylene glycol and 6 to 18 per cent. of glycerine.

46930. British Insulated Callender's Cables Limited. Improvements in or relating to friction clutches. (April 9, 1951.) Axially aligned clutch member controlled by means of fluid pressure acting on a flexible diaphragm of a stationary diaphragm chamber located outside clutch member.

46931. British Insulated Callender's Cables Limited. Improvements in or relating to friction clutches. (April 9, 1951.) Annular driving faces disposed between concentrically arranged chambers.

46932. S. Junghans. Method and apparatus for continuously casting rimmed steel. A rod of predetermined length with a solid self supporting crust and a molten core of the whole length of rod is cast in a chilled mold tube the predetermined length being more than the length of the mold tube.

46933. Cassella Farbwerke Mainkur. Manufacture of 1,4-dihydrazinophthalazines. Reacting phthalic dinitrile (1 mole) with hydrazine (3 moles).

MARCH 21.

46934. F. Fahrni. Process of manufacturing composite wooden boards and more particularly wooden boards consisting of several layers. Comprising mainly forming a porous core material from ground wood and a plastic binder forming a layer of humid porous shavings and finally pressing the layer under heat and pressure.

46935. F. Fahrni. Machine for applying adhesive to chips or the like for the manufacture of pressed articles. Consisting of a rotatable adhesive applying drum; an adhesive transfer roll and bearing means.

46936. Dunlop Rubber Company Limited. Improvements in or relating to tools for removing tyres from wheels. Wherein

° a flange reaction and tyre-displacement members having similar hooked ends are adapted to engage diametrically opposite positions on wheel rim and later member is capable of linear movement.

46937. Anstalt Fur Die Entwicklung Von Erfindungen Und Gewerblichen Anwendungen "ENERGA". Safety device for projectiles. Of the type comprising a head fuse and a detonator disposed towards the rear of the projectile and which are provided with a safety device disposed between fuse and detonator.

46938. A. P. Fitzjohn and George Turton Platts & Company Limited. Improvements in buffers. Plunger moving inwardly initially retarded by air cushion in it and finally by an air cushion and resistance of hydraulic fluid displaced between axial hydraulic cylinder in stationary piston and annular hydraulic chamber around it, the fluid operating an annular piston against compression of air.

46939. Leon, Sylvain, Max Lejeune. Manufacture of substitutes of leather, crepe rubber or kindred articles. Mixing latex with bentonite swollen with water and vulcanising agents, flocculating the mixture into two phases, eliminating water and vulcanising.

MARCH 22.

46940. Standard Telephones and Cables Limited. Improvements in or relating to cross-bar switches of the type used in telephone systems. Comprises a first set of outlet conductors, a second set of conductors perpendicularly disposed, movable contact fingers.

46941. Soc. Coll. Adriano Gardella & F. Llo. Improvement in pickers for textile looms. A metallic picker being provided with an elastic damper formed by a cylinder sliding on the guide rod and a neck for the connection of the picker propeller.

46942. Titan Company Inc. Improvements in or relating to the drying of plastic materials. (February 4, 1952.) Comprising chute having perforated bottom, resilient means for maintaining said chute in upstanding position and means for vibrating said chute.

46943. Automatic Telephone & Electric Company Limited. Improvements in carrier current transmission systems. (April 12, 1951.) The gain controlling circuit includes thermionic amplifiers of

one or more stage operating on rectified reaction principle, a relay being controlled by the anode current flow in the tube.

MARCH 24.

46944. Dr. Hans Maeder. Readily weldable aluminium—magnesium alloy. Adding one or more elements boron, beryllium, calcium, lithium, titanium and/or one of the rare earth elements.

46945. Council of Scientific & Industrial Research. Manufacture of saponins (commercial grade) from Indian soapnuts. Separating saponins from soapnuts by fractional precipitation of an aqueous soapnut extract with ammonium sulphate.

46946. Council of Scientific & Industrial Research. Improvements in or relating to the manufacture of saponins, (commercial grade). Isolating saponins from shakakai (acacia concinna) by precipitation with industrial alcohol.

46947. Council of Scientific and Industrial Research. Isolation and separation of bitter constituents from the trunk and/or root bark of nim. Repeatedly extracting the trunk of root bark of nim at ordinary temperature with 40-95 per cent. water miscible solvents.

46948. Wargons Aktiebolag. Method for the production of ferromanganese. Ore is pre-reduced to MnO with CO-containing gas while simultaneously oxidizing CO-content in the reduction gas.

46949. British Insulated Callender's Cables Limited. An improved process for recovering copper and tin from tinned copper. (April 11, 1951.) Tinned copper treated with an acid solution of copper-sulphate.

46950. Hoover Limited. Improvements relating to electric irons. Comprising electrically heated sole plate carrying a flash boiler communicating with steam openings in the sole plate, a reservoir of water communicating with the boiler and a cover shell and handle surrounding the reservoir, in which the handle, cover shell and reservoir are removable as a unit from the sole plate sub-assembly.

46951. O. Higginbotham. Improved process for clarifying liquids, particularly sugar cane juices, extracting and/or removing therefrom wax, gums, fibers, colloids and other impurities, and products so obtained. Comprising injecting

air in the liquid and heating it in a tank to form a temperature gradient therein.

MARCH 25.

46952. B. V. Javdekar. Improvements in and relating to saddle pad for the bicycle and the like. The saddle pad is characterised in that a groove or grooves are provided on the inner side of the edge of the pad which grips the saddle frame.

46953. Nyegaard & Co. A/S. Process for the making of adrenocorticotrophin preparations with prolonged action. An alkaline protein and a water soluble zinc salt is added to an adrenocorticotrophin solution in water and adjusting the pH between 6 and 8.

46954. Farbenfabriken Bayer. New complex cobalt compounds. (November 2, 1951.) [Addition to No. 42542.] Reacting phthalic acid with cobalt salt at a lower temperature in presence of an oxidizing agent.

46955. Bank of America National Trust & Savings Association. Improvements in or relating to razors. Having a blade magazine consisting of two shells spaced from each other by a spacer element.

46956. Imperial Chemical Industries Limited. Process for the manufacture of new coupling components of the 2-hydroxy-3-naphthoylarylamide series and the new components made by the said process. (April 6, 1951.) Condensing 6-amino-indazoles with 2-hydroxy-3-naphthoic acid in the presence of a condensing agent.

46957. Telephone & Electrical Industries Pty. Limited. Improvements relating to selector banks for automatic telephone systems. (April 16, 1951.) An insulating separator formed in two arcuate complementary pieces adapted for insertion in selector banks.

46958. Telephone Manufacturing Company Limited. An electric selecting device responsive to impulses. (April 2, 1951.) Including two selective relay units each having a plurality of sets of contacts, an armature, and an energising coil.

46959. Standard Telephones and Cables Limited. Improvements in or relating to voice frequency signal receivers. Comprises a frequency multiplier for carrier frequency signal, the A.C. energy of multiplied frequency operating an output relay.

46960. Robert Bosch GMBH. Improvements in pneumatic governors for compression ignition engines. Control member in connection between induction manifold and governor chamber maintains the connection open during induction strokes cutting it off at least at high engine speeds.

46961. Maschinenfabrik Augsburg-Nürnberg A.G. Improvements in and relating to grating-cleaning devices for the inlets of water-power plants and the like. Grinding frame co-acting with rake adapted to be let down to upper edge of grating by ropes and container for raked deposit material.

MARCH 26.

46962. British Insulated Callender's Cables Limited. Improvements in the manufacture of conductive rubber and conductive rubber bodies. Mixing rubber solution with carbon black dispersion and coagulating with a substance which is not compounding ingredient, separating and drying the coagulum.

46963. Void.

46964. Switchgear & Cowans Limited. Improvements relating to oil circuit breakers. With means for controlling the opening speed of the moving contact, an arc control stack having vents for escape of fluid, the stack so arranged that the total vent area can increase due to high pressure, generated by the arc formed on opening the contacts at high currents.

46965. Void.

46966. Eadie Bros. & Co. Limited. Improvements in or relating to rings for ring spinning and doubling frames. (August 9, 1951.) The upper portion of the ring to accommodate the traveller is of less thickness than the lower portion of the wall.

46967. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric discharge tubes. The flat bottom part of the envelope having sealed in it a number of contact pins arranged on a circular arc and at least one insulating strip placed inside the tube over the tube bottom on two diametrically opposed pins.

46968. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to cathodes for electric discharge tubes. Comprising internally a supply of alkaline earth metal compounds and its wall

being formed, at least in part by porous body of tungsten, molybdenum or like metal, manufacture of the porous body and sealing of supply chamber carried out in a single operation.

46969. Allied Ironfounder Limited. Improvements in or relating to moulds for centrifugal casting of metals. Providing an extension comprising a removable tubular member having a bore.

46970. V. Rawls. Improvements in apparatus for relugging tyres. (June 11, 1951.) A rotary stitching wheel has means for urging its periphery against a lug being stitched on a tyre carcass and means for progressively canting said wheel.

46971. Oldham & Son Limited. Improvements in storage battery separators. (July 3, 1951.) Resin protected felted fibrous web having a density of 3.8 to 4.5, a porosity between 5 and 9 seconds and a dry strength in excess of 0.8 lbs. per square inch per mil thickness of the web.

46972. Oldham & Son Limited. Improvements in storage battery separators. (July 3, 1951.) Comprising plies of a porous water-laid felt, the fibres of which are protected by a coating of acid resistant thermosetting resin reacted to its infusible stage, one of said plies bearing transverse upthrust portions forming ribs across the separator, the plies being adhesively united by fused grains of a thermoplastic resin.

46973. Societe D'Electro-Chimie, D'Electro-Metallurgie Et Des Acieries Electriques D'Ugine. Improvements in or relating to the desulphurisation of steel. (January 9, 1952.) Intermixing steel containing a reducing agent, a slag containing mainly lime and fluor-spar, from 15 to 40 per cent. by weight of lime and from 85 to 60 per cent. of fluor-spar.

46974. Z. M. Burda. Improvements in or relating to the propelling mechanism of bicycles. Driving wheel driven by crank through intermediate idler, gears, encased in a gear box fitted at the meeting of front and near vertical members.

MARCH 27.

46975. A. N. Bansal. Water-proof and heat-proof sticking paste for joining marble and alabaster piece [Post dated to December 8, 1952.] Paste containing 14.54 per cent. celluloid dissolved in

85.46 per cent. of Amyl acetate of weight.

46976. American Cyanamid Company. Improvements in or relating to machine for fabricating capsules from elastic films. (September 28, 1951.) Comprising means for forming pockets in one elastic sheet material, means for depositing a measured charge of substance therein and means for sealing a second sheet over it.

46977. Ruston-Bucyrus, Limited. Improvements in or relating to automatic feed for cable-tool drills. A rope passes from a winch drum around sheaves then leads to the hole to be drilled.

46978. C. Formenti. Shuttle for weaving looms. Moulding shuttles from synthetic resins of phenol and aldehyde with a filler of fabric cuttings.

46979. De Directie Van De Staatsmijnen In Limburg, Handeland Voor En Namens De Staat Der Nederlanden. Process for preparing oximes by reduction of nitro-paraffins. Bringing nitroparaffins into contact with hydrogen sulphide in the presence of an amine.

46980. Void.

MARCH 28.

46981. Council of Scientific and Industrial Research. Solar cooker. Comprising fixed plate mounted on a base frame, a movable plate on the fixed plate with a pin on the movable plate and passing through the fixed plate, a turning device on the movable plate, carrying an optical element and a cooker, optical element being a curved paraboloidal reflector and the turning device allowing movement of the optical element and cooker about an axis other than the vertical axis.

46982. The Electric Storage Battery Company. Improvements relating to microporous materials. Impregnating a thermoplastic microporous material with monomeric styrene and polymerizing *in situ* at least a part of styrene.

46983. Xetal Products Limited. Improved fibrous pads for upholstered and like articles. (April 10, 1951.) A resilient fibrous stuffing and an outer layer of soft fibers united thereto.

46984. Kerlux, S. A. Method of manufacturing lamelliform earthenware. A fire-proof support is covered with at least

one layer of an "inconsistent ceramic material" then the support together with the material thereon are heated.

MARCH 29.

46985. W. Opavsky. Method of producing seamless hollow bodies such as hoses, hollow cushions and the like from solid bodies such as strips, sheets, foils and the like. (May 19, 1951.) Swelling a blank of plastic compositions by a liquid so that a solid unswollen core is left and subjecting swollen blank to heat treatment causing rapid evaporation of swelling liquid on surface.

46986. Void.

46987. Void.

46988. Void.

46989. Void.

46990. Void.

46991. Void.

46992. Void.

46993. Void.

46994. Council of Scientific & Industrial Research. Extraction of nicotine and an extraction tower for the purpose. By elution of tobacco broth with a solvent in an extraction tower provided with rotating discs and working on the counter current principle.

46995. Council of Scientific and Industrial Research. Preparation of a malted milk product. Mixing milk with malt extract prepared from ragi or cholam and wheat or maize and concentrating and drying resulting product.

46996. Void.

MARCH 31.

46997. J. R. Geigy A.-G. Improvements in or relating to new phosphoric acid esters. Reacting an aliphatic phosphoric or thiophosphoric acid diester halide with a non-condensed heterocyclic compound having an endocyclic enolisable keto or thioketo group.

46998. Eternit Pietra Artificiale Societe per Azioni. Machine for corrugating sheets of asbestos cement in fresh condition. Comprising mainly a sucker constituted by a layer of permeable material supported by a plurality of rigid bodies displaceable in respect to one another and by impermeable walls confining a chamber behind the said layers.

46999. Microcine S. r. L. Sound-film kinematograph apparatus for picking-up, projecting, printing and sound-tracking. With a case divided into two compartments, one containing a shaft carrying a pulley driven by an electric motor, an endless screw, a shutter and an eccentric and an amplifier and the other containing film advancing members, sound recording and reproducing devices, view finder, a reflector behind the objective and a cover with an aperture which can be closed and is in front of the reflector.

47000. E. Gretener. Illumination system for the projection of coloured lenticulated film. [Addition to No. 42901.] Lenticulated film projected by a colour filter set of at least two dichroic mirrors placed such that light beam transmitted by the first mirror impinges upon the second one farther away from light source, the mirrors being spaced apart with their surfaces inclined by approximately equal angles in opposite directions to incident light and at least two reflecting mirrors one each in the path of each dichroic mirror.

47001. F. Mulka. Improvements in or relating to sliding clasp fasteners. Fastener elements are embraced at the base with interposition of the material of the fastener stringer.

APRIL 1.

47002. R. G. Stead. New and improved interlocking building blocks and wall constructions or the like constructed therewith. A series of interlocking building blocks are formed wherein their vertical ends are returned at similar angles.

47003. N. V. Philips' Gloeilampenfabriken. Improvements in or relating to transmission systems for stereophonic signals and transmitters and receivers for use in these system. In which at the transmitter end coherent stereoscopic signals A and B are emitted as modulations of the same carrier wave, whereas at the receiver end the signals emitted as modulations of the carrier wave A and B are supplied to separate reproducing devices.

47004. N. V. Philips' Gloeilampenfabriken. Improvements in or relating to refrigerators. A refrigerator comprising two spaces varying in volume communicating with one another by freezer regenerator and cooler.

47005. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to travelling wave tubes. In which an electron beam is produced to interact with an electromagnetic wave travelling along a helical conductor, which beam is preliminary intensity modulated with the use of a control grid, the cathode, control grid and anode being secured to metallic discs secured to the envelope.

47006. C. L. Arnold, R. W. Dowsett, A. V. Sharman and "M.K." Electric Limited. Improvements in or relating to electrical socket contacts. (June 22, 1951.) Of the kind comprising a plurality of jaws of which at least one is resilient, adapted to be separated by the insertion of the cooperating pin or the like, and means arranged to permit only a limited degree of separation of jaws.

47007. The Mond Nickel Company Limited. Improvements relating to the addition of magnesium to molten iron. (April 18, 1951.) Adding all or greater part of magnesium in the form of nitrided magnesium or nitrided magnesium alloy.

47008. T. M. M. (Research) Limited. Improvements in supporting and weighting means for the upper rollers of textile drafting apparatus. The upper rollers being mounted on an arm in spaced arrangement, the arm incorporating means for cushioning the loading pressure.

APRIL 2.

47009. Radio Corporation of America. Wide-band amplifier circuits. Having a grid input first tube and a cathode-input second tube, the grid of the second tube being substantially grounded for signal potential, the coupling for signals from the anode of the first tube, to the cathode of the second including a series resonant circuit.

47010. Director, Indian Institute of Science, Bangalore. A process for the manufacture of guanidine derivative for use as chemotherapeutic agents. Reacting cyanamide derivative of sulfonamide with amine or cyanamide derivative with a sulfonamide.

47011. The General Electric Company Limited. Improvements in or relating to apparatus for indicating phase relationship between electrical quantities. (April 3, 1951.) For comparing phases of

quantities at two points, signal representing vector position of the quantity is transmitted from each point and received at a third point and oscillations dependent upon the said vector positions are applied to a phase discriminator through paths one of which include a phase shifter.

47012. The General Electric Company Limited. Improvements in or relating to dry plate rectifier assemblies. (April 3, 1951.) Including an insulating member having a hole in it, a pair of wires passing through and secured in further holes in said member, a group of rectifier elements situated within the hole between the pair of wires.

47013. Ruhrchemie Aktiengesellschaft, and Lurgi Gesellschaft für Wärmetechnik m.b.H. Improvements in or relating to iron catalysts. [Addition to No. 43682.] Comprising adding to iron hydroxide a part of SiO_2 in the form of a siliceous material other than potassium silicate.

47014. Titan Company Inc. A method for the drying of plastic materials. (February 4, 1952.) Extruding plastic material into plurality of continuous strings, arranging an open structure bed composed of said strings in meandering form and passing drying gas through said bed.

47015. Farbenfabriken Bayer. Process of preparing ice-colours in textile printing and dyeing. Printing on the fibre with paste containing neutral fixed alkali salts of diazoamino compounds and fixed alkali salts of ice-colour coupling components and developing by steaming.

47016. Farbenfabriken Bayer. Process of preparing ice-colours textile printing and dyeing. Printing on the fibre with a paste containing neutral fixed alkali salts of diazoamino compounds and fixed alkali salts of ice-colour coupling components and then developing by steaming.

47017. Imperial Chemical Industries Limited. New pyrimidine derivatives. (April 6, 1951.) Subjection a thiobarbituric acid to reductive desulphurisation.

47018. Imperial Chemical Industries Limited. Improvements in or relating to the manufacture of pyrimidine derivatives. (April 6, 1951.) Reducing 2-alkoxy-hexahydropyrimidine-4 : 6-dione derivatives.

47019. Void.

47020. Heinrich De Fries G.m.b.H. Chain pulley blocks. Chain wheel comprises a cylindrical pin enclosed by a bearing and having chain link pockets, rigidly secured to driving wheel.

APRIL 3.

47021. Wuerth. Spindelfabrik G.m.b.H. New or improved bearing arrangement for pressure rollers of draw frames on spinning machines, especially for drawings. There being provided for each roller spindle only one roller bearing for absorbing the roller load and a second roller or plain bearing for absorbing the roller tension.

47022. Aladdin Industries Limited. Improvements in or relating to wick adjusting mechanism for burners. (June 15, 1951.) Comprising a bracket having means to engage the exterior of the wick and a portion extending downwardly from the said wick engaging means and shaped to be engaged by a wick adjusting pinion.

47023. Aladdin Industries Limited. Improvements in or relating to wicks for blue flame oil burners. (June 15, 1951.) A wick having sockets on its sides.

47024. Dunlop Rubber Company Limited. Improvements in or relating to the production of pile fabric. (April 11, 1951.) A pair of vertically spaced electrodes, means for passing adhesively coated backing material in contact with the upper electrode and means for delivering pile fibers thereon.

47025. Uniprint Gesellschaft Fuer Neue Druckverfahren m.b.H. Improvements in the preparation of intaglio moulds. Negatives are prepared from the originals to be printed, these are then screened, printed on a copying film which is washed and dried after transference to a support whereupon intaglio moulds in rubber, artificial resin or metals are moulded.

47026. Maatschappij Voor Kolenbewerking Stamicarbon N.V. Process for carrying out rapidly proceeding chemical reactions. Mixing the reaction components in a cyclonic current.

APRIL 4.

47027. Void.

47028. Mechanical Products Inc. Improvements in and relating to electric

circuit breakers. Of the kind incorporating a thermal latch connected so as to be responsive to the heat of the conducted current and cause the controlled circuit to be opened automatically upon the occurrence of a predetermined overload current.

47029. Mechanical Products Inc. Improvements in and relating to electric circuit breakers. Involving a split hollow casing of insulating material, which casing forms a plug and houses the operative parts of the circuit breaker.

47030. Tecalemit Limited. Improvements in or relating to filters. (April 5, 1951.) Comprising sheet filter materials with series of projection on its sides.

47031. H. Zalcman. Composition and method of removing hair and wool from animal hides and skins. Being an aqueous suspensions having hydrosulphide ions provided by a polyvalent metal, sulphide or hydrosulphide and hydroxyl ions provided by metal hydroxide.

47032. Cilag Limited. Process for the production of new aralkyl acyl acetic acid dialkyl amides and repellents containing them. Reacting an acyl acetic acid dialkyl amide with an aralkanol in the presence of a basic condensation agent like alkali alcoholates or alkali hydroxide.

47033. The Mond Nickel Company Limited. Improvements relating to the addition of magnesium to molten iron. [Addition to No. 47007]. Adding magnesium to molten iron in the form of nitrided magnesium or nitrided magnesium alloy in admixture with a promotor of the decomposition of magnesium nitride.

APRIL 5.

47034. Technicolor Motion Picture Corporation. Light dividing system. Consisting of a lens system and a light transmitting body having a surface obliquely intersecting the light beam, said surface having two coatings of thin dielectric layers which have different light transmitting and reflecting characteristics.

47035. The Borden Company. Improvements in or relating to a method of preparing an infant food. Admixing lactose, fats and proteins, lactose being in larger proportion than fats and fats

in larger proportion than proteins, palm oil constituting at least half the total fats.

47036. American Cyanamid Company. Improvements relating to sterile, broad-spectrum antibiotic—containing wound dressings. (July 4, 1951.) Containing a carrier and an ointment comprising a dispersing agent, anhydrous lanolin, petrolatum, a wax, mineral oil and an antibiotic.

47037. Fabrique De Coutellerie Ch., Elsener. A tin opener. Comprises a recess on one side of which lies a supporting arm and on the other side a cutting edge running obliquely to the longitudinal direction of the opener.

APRIL 7.

47038. S. D. Master and H. K. Umrigar. Improvements in or relating to means for regulating the discharge of liquids from supply mains and for like purposes. Chamber having outlet and inlet openings and means whereby communication between said chamber and the supply mains or between said chamber and the discharge outlet may either be established or cut-off.

47039. Void.

47040. Simplex Electric Company Limited. Improvements in electric switches. Of the kind in which fixed and moving switch contacts are carried by strips mounted upon a base, also carrying terminals for effecting connections to the switch and the contacts are adapted to be operated by pivotally mounted can means actuated by a lever.

47041. Internationella Siporex Aktiebolaget. Means for cutting semi-plastic bodies cast in a mould, preferably light weight bodies, and a casting mould used in connection with the cutting means. Comprising a cutting bed on which the body adapted to rest during the cutting operation and frame with cutting wires is adapted to move.

47042. Imperial Chemical Industries Limited. Improvements in and relating to the production of yarns and filaments. (April 24, 1951.) Solid particles of filament forming materials are passed through a plate with holes under a constant temperature so as to keep the particles in molten state and then forcing the melt through ducts to spinnerets.

47043. Imperial Chemical Industries Limited. Polyethene compositions. Comprises polyethene and a minor proportion of a substituted or non-substituted dithio-carbamate of a metal from one of the transition periods of the periodic table.

47044. Telephone Manufacturing Company Limited. Improvements in or relating to carrier wave telephone or like systems. (April 11, 1951.) Different transmitted frequency groups for the two different directions derived from the voice frequency channels by two stages of modulation.

APRIL 8.

47045. J. Schwarz. Process for the production of screws and nuts. (September 24, 1951.) Work is consolidated over its entire length by momentary pressures acting tranversely in relation to the axis of the screw.

47046. J. Schwarz. Process for increasing the strength of unalloyed or alloyed bar steels, tubes or the like. (October 8, 1951.) Comprising mechanical cold compressing steel bars by momental pressures acting in small sections distributed over the circumference of the steel bar.

47047. Nordisk Insulinlaboratorium. Improved process for the preparation of prolonged effect insulin products. Characterised in mixing the reactants in proximity of isophanous conditions at pH between 6 and 8.

47048. Nordisk Insulinlaboratorium. Improvements in or relating to the preparation of prolonged effect insulin products. [Addition to No. 47047.]. Wherein concentration ($C_0 + p$) of cresol and phenol lies between 0.1% and 0.7% by volume of total liquid volume.

47049. Universal Winding Company. Improvements in or relating to winding machines, in particular high speed precision winding machines. (February 5, 1952.) A rotary winding spindle, a yarn guide for traversing yarn guide means for rotating said spindle and operating the yarn guide.

47050. Chas. Pfizer & Co., Inc. Improvements in or relating to milk products particularly for animal feeding. (March 5, 1952.) Comprises high proportion of fat, a source of milk proteins, multi vitamins, antibiotic, trace minerals and an emulsifier.

47051. Ruhrchemie Aktiengesellschaft and Lurgi Gesellschaft für Wärmetechnik m.b.H. Process for the synthesis of oxygen—containing organic compounds. Using catalyst of precipitated iron containing more than 15 percent. of Cu and 4 percent. to 15 percent. of free alkali at 5 atmospheres of pressure.

47052. Tecalemit Limited. Improvements in lubricant and liquid distribution systems. (April 12, 1951.) Including a metering device with a tube of capillary dimensions and a rising drop indicator.

47053. Centre National De La Recherche Scientifique. Improvements in composite mirrors of large area, in particular for concentrating solar energy. Comprising multiplicity of elementary mirrors constituted by elastically deformable plates under action of individually adjustable mechanical deforming means giving every mirror the non-symmetrical shape corresponding to that of a small section of the composite large mirror.

APRIL 9.

47054. D. Raja Rao. The counting stand. Vertical member having on its sides two vertical rows of ten horizontal holes, through which rods (representing units) can be slid.

47055. P. N. Choudhry. Selector switch for automatic telephone exchange. Comprises three stepping magnets and relay circuits giving the wiper motion along three mutually perpendicular axis.

47056. P. S. Natarajan. The direct reading railway track gauge. Variation in gauge of track translated to relative movement of two halves of an axle magnified and indicated or recorded by a mechanism.

47057. Westinghouse Brake & Signal Company Limited. Improvements in or relating to braking means for railway Wagons and the like adapted to be controlled according to varying conditions or loading. (April 10, 1951.) Variable leverage mechanism controls the brake cylinder pressure automatically in accordance with the means deflection of the vehicle springs.

47058. W. C.t. Hart & Zn. Instrumenten-en Apparaten-fabriek N. V. Hanging spinning or twisting pot. A tube-like driving shaft to the bottom of

which is attached the spinning or twisting pot and which is rotatable in a casing by bearings and means for lubricating the bearings.

47059. Imperial Chemical Industries Limited. Improvements in or relating to ventless short period delay electric detonators. (June 20, 1951.) Delay composition comprises a mixture of 91-95 per cent. by weight red lead and 9-5 per cent. silicon, not less than 90 per cent. of silicon particles being less than 5 microns size.

47060. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to the preparation of quaternary ammonium salts of tri (dialkylaminoalkoxy)-benzene. (March 13, 1952.) (Addition to No. 39842). Reacting a tri (dialkylaminoalkoxy) benzene with an alkyl halide in the presence of a solvent medium in which both the reagents are soluble.

47061. G. W. Macilwaine. Improvements in the extraction of liquid from liquid-bearing material. By impregnating solute bearing material with a solvent and thereafter subjecting to mechanical pressure.

47062. The Vitarama Corporation. Diaphragm controls for lenses for multi-camera structures. Including a common adjusting device or the fixed part of the camera structure, and flexible motion transmitting connection disposed between common adjusting device and respective diaphragm controls transmitting corresponding movements to all diaphragm controls simultaneously and independently of their positions along converging guideways.

47063. The Vitarama Corporation. Apparatus for moving the film in motion picture cameras or projectors. In which air pressure behind a loop of the film supplies the force to move the film strip from one picture frame to the next.

APRIL 10.

47064. Machinery Manufacturers Corporation Limited. Improvements in or relating to carding engines. A reciprocating tripping bar operated from the doffer shaft, an electromagnet in the vicinity of the tripping bar, the electromagnet when energized operates the bar to stop the doffer cylinder.

47065. B. B. Dutta. Improvements in or relating to taxi-meters. A single worm shaft driven by a cable from two cab operates the driving unit and the mile meter in a cab engaged position.

47066. Void.

47067. V. R. Barve. Air cooling curtains. Wherein the cloth is treated with chemical mixture is suspended in a water tank before a window.

47068. Void.

47069. Void.

47070. Dunlop Rubber Company Limited. Improvements in compounding rubber. (April 11, 1951.) [Addition to No. 46419.] Incorporating humic-acid and a methylene donor with unvulcanised rubber and heating the mixture.

APRIL 12.

47071. Void.

47072. Void.

47073. Dunlop Rubber Company Limited. Improvements in or relating to resilient suspension springs. (April 14, 1951.) Wherein relative displacement of the loading members is adapted to cause compression of a single resilient member or a plurality of resilient members in parallel or of a plurality of resilient members in series.

47074. Dunlop Rubber Company Limited. Improvements in or relating to apparatus for detecting cavities in articles by ultrasonic waves. (April 25, 1951.) Comprising a source of ultrasonic oscillations, a pick-up device and means for immersing the article in a liquid between said source and pick-up device.

47075. Ruhrehemie Aktiengesellschaft and Lurgi Gesellschaft für Wärmetechnik m.b.H. Process for the catalytic hydrogenation of carbon monoxide. Using an iron catalyst precipitated from solution in which 10—50 per cent. of the iron is in trivalent form, washing the precipitate with an ion exchange medium and drying the precipitate by means of gaseous oxidising medium.

47076. Void.

APRIL 15.

47077. Void.

47078. Void.

47079. John Bright & Brothers Limited. Improvements in and relating to stretching frames for threads, cords and the like. (May 3, 1951.) Applying to the bottom or take-off bobbin a brake which applies a declining pressure as the bobbin empties and to the top or take-up bobbin a weight which declines as the bobbin fills.

47080. John Bright & Brothers Limited. Improvements in and relating to machines for winding threads and the like. (May 3, 1951.) Mounting a weight on a bell crank lever pivoted on an axis parallel with the bobbin axis and counter-weighted so that as the bobbin fills the weight is automatically reduced.

47081. N Pensabene. Improvements in or relating to electric induction motors. (June 6, 1951.) Comprises a stator with plurality of laminated stator magnets in a ring with axis parallel to the axis of stator.

47082. Lincoln Electric Company Limited. A new or improved welding flux. (April 16, 1951.) Flux consisting of titania, manganese oxide, silica fluorine and other ingredients in the proportion of 18-50 per cent., 10-30 per cent., 20-40 per cent., 0-10 per cent. and 20 per cent. respectively.

47083. Bigelow-Sanford Carpet Company, Inc. Improvements relating to the manufacture of floor coverings. Securing bights of soft-surface material to the surface of a backing sheet by a thermoresponsive adhesive.

47084. Ciba Limited. Process for the manufacture of acids of the trisnorlanostane series and derivatives thereof. (May 10, 1951.) Oxidizing isocholesterol or its derivative in stages and reducing trisnorlanostane acid so obtained to stane.

47085. M. Maul. Record card controlled machine. For all positions associated with a character there is provided a common drive and a clutching and declutching device.

47086. M. Maul. Record card controlled machine. A pair of position-checking analyzers searching a non-marked card portion is arranged relative to the sorting analyzers.

47087. Merck & Co., Inc. Preparation of foodstuff. Coating the foodstuff granules with a solution of nutrients and zein, drying the grains and finally applying a coating of shellac to enriched grains.

47088. Hughes Tool Company. Well drill. Comprising a head having transversely extending shafts carrying rotary cutters which are provided with wear resistant inserts, the ends of which protrude from the surface.
47089. G. & J. Weir Limited. Improvements relating to centrifugal pumps. (April 27, 1951.) Thermostatic devices act jointly on common sensitive member to effect operation of bypass flow.
47090. Ciba Limited. Process for the manufacture of compounds of the steroid series. Ketones of the steroid series are prepared by treating 7-keto-8, 9-oxido steroids with a metal and an acid.
47091. Ciba Limited. Process for the manufacture of degradation products of tetracyclic triterpenes. (May 18, 1951.) Converting derivatives of acids containing 27 carbon atoms into carbinols splitting off water, introducing halogen atom, splitting out hydrogen halide and treating dienes thus formed with oxidising agent.
47092. Societe en commandite simple dite: S.E.B.I.M. Societe D'Exploitation Des Brevets Et Inventions Marrie. Four-driving-wheel farming tractor. Wheels driven through differential gear box and a pair of transversal shaft halves and are mounted on separate side walking beams.
47093. G. Zuelchaur. Plastic rim gripping closure for bottle or the like container. Lower face of the flange at the end of the cylindrical wall of the closure having a circumferential groove so as to provide a lip to grip the bottle neck.
47094. Monsanto Chemical Company. Improvements in or relating to method of stabilizing soils and new soil erosion composition for use in said method. Adding to the soil an expanding lattice clay and a water soluble polymeric polyelectrolyte.
47095. Imperial Chemical Industries Limited. Improvements in or relating to the manufacture of pyrimidine derivatives. (April 23, 1951.) 2-alkoxy-5-alkyl tetrahydropyrimidine-4 : 6-dione substituted in 5-position by a monocyclic carbocyclic radical is reduced by catalytic hydrogenation in a neutral or alkaline medium.
47096. H. Pearson. Improvements relating to cleaning appliances. (April 17, 1951.) Knitting a narrow strip of nylon into a tubular fabric, closing in at one end and rolling it up from open end.
47097. C. C. Wakefield & Company Limited. Improvements in or relating to lubricating oils. (April 23, 1951.) Comprises a mineral lubricating oil base and an ester of acetic acid of the formula $\text{ROOC} \cdot \text{CH}_2 \cdot (\text{X})_n \cdot \text{CH}_2 \cdot \text{COOR}$ wherein R is an alkyl or aryl radical, X is sulphur, selenium or tellurium and n is 2, 3 or 4.
47098. Wingfoot Corporation. Improvements in coating composition. Comprising neoprene, a reinforcing pigment having low electrical loss characteristics and a curing agent.
47099. Telegraph Construction & Maintenance Company Limited. Improvements in telecommunication cables. (April 17, 1951.) Comprising a plurality of large co-axial cores and a plurality of smaller co-axial cores disposed in interstices of the large co-axial cores.
47100. Vereinigte Kugellagerfabriken Aktiengesellschaft. Measuring device for ascertaining the length of a part of a bearing. Bolts or balls corresponding in shape and size to bearing elements and mountable in same relative positions as the elements and dial gauge for indicating distance measured or deviation from standard object.
47101. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of producing resinous foam masses and electric incandescent lamps using such masses. Wherein condensation products of phenol and aldehyde are heated with hexa-methylene tetramine.
47102. Daimler-Benz Aktiengesellschaft. Improvements relating to precombustion-chamber diesel engines. (January 16, 1952.) Portion of precombustion chamber formed with jet openings projects into main combustion space formed by depressions in piston head; in dead centre portion said portion enters into inner depression and the jets are guided by surface of outer depression.
47103. Ciba Limited. Process for the manufacture of new quaternary azacycloalkane compounds. (a) 3-Aza-pentylene-(1 : 5)-bis-aza-cyclo-alkanes or their partially quaternated derivatives are treated with quaternating agents or (b) a reactive ester of a corresponding nitrogenous oxyalkyl compound is reacted with an amine or (c) a secondary 3-aza-pentylene-1 : 5-bis ammonium

compound is reacted with formaldehyde in presence of formic acid or with reactive esters.

47104. Eugen Bauer GMBH. Change-over apparatus for motion picture projectors. Sliding bolt consisting of two parts coupled together, one part of which at first actuates the charge-over switch only and subsequently engages the second part which the shutter actuates.

47105. Eugen Bauer GMBH. Motion picture projector. Having a cooling fan with a double-sided centrifugal impeller driven by the driving motor, one side whereof drawing air for cooling the film guide track and the gear mechanism, whilst the other side draws cooling air through the motor casing, both the air being expelled by the impeller directly to the exterior of the projector.

47106. Lanova A.-G. Air or liquid cooled cylinder head with lined combustion chamber for fuel injection internal combustion engines. (November 22, 1951.) Combustion chamber and valve seatings arranged in lining covering entire cross section of cylinder bore.

APRIL 17.

47107. Void.

47108. Knoll Aktiengesellschaft. Process for obtaining crystallised glycosides acting on the heart, from *boviea volubilis*. Dried pulverised *boviea volubilis* is extracted with methanol acetone is added to the extract and the glycosides isolated from methanol-acetone solution by absorption on Al_2O_3 .

47109. Knoll Aktiengesellschaft. Process for the preparation of organic salts of the γ -methyl-mercapto- α -aminobutyric acid and its N-acyl derivatives. Reacting α -methyl-mercapto- α -aminobutyric acid or its N-acyl derivatives with equimolecular quantities of choline.

47110. Soberma. Magnesium production process by reduction at elevated temperatures. Contacting reaction mixture with molten slag in a ratio which does not differ from the value $\frac{T-F}{T}$ by more than 30%, T being the temperature of slag before adding the reaction mixture and F the melting point of the slag.

47111. The Tainton Company. Improvements in or relating to the production metal platings. The article is cleaned and the particles to be coated are impacted on it.

47112. Yanmar Diesel Engine Company, Ltd. Improvements in or relating to lubricating oil feed arrangements for internal combustion engines. Oil feed channel in cylinder wall extending from pump to crank bearings with visual indicator interposed in the channel.

47113. Yanmar Diesel Engine Company, Ltd. Improvements in or relating to lubricating oil feed indicators for internal combustion engines. Casing of transparent material and exit tube disposed in oil line: a rotor with indicating disc supported in exit tube to be freely rotatable by oil flow.

47114. Morphy-Richards Limited. Improvements in and relating to electric switches. Separation and engagement of a pair of contacts is controlled by two temperature responsive devices, one being arranged to effect initial separation of contacts as its temperature increases and the other being arranged to increase the gap between the contacts when it cools.

47115. IBM United Kingdom Limited. Improvements in and relating to protective systems for electric motors. Mechanical interlock operated automatically during the cycle of a machine effects a motor cut out operation despite one at least of the control elements tends to retain its operative position.

47116. Void.

47117. Societe Du Vacuum Concrete. Process and apparatus for the compacting of mixtures consisting of solid particles and of liquid, applicable particularly in the treatment of fresh concrete. Subjecting the concrete mass to the action of vibrating units and to the action of filtering units within which exists a vacuum and one side of the mass to be compacted is exposed to atmospheric pressure.

47118. Ciba Limited. Process for the manufacture of new trialkylamines. Preparing tris-(2-dialkylaminoethyl)-amines by methods known to prepare trialkylamines.

47119. Pressed Steel Car Company, Inc. Improvements in railway car of laminated wood and cellular construction. Consisting of unitary laminated floor wall and roof panels forming mono-coque housing with pair of laminated panels held at right angles by carrier members.

APRIL 18.

47120. Timboga Corporation. Improvements in or relating to moulds or the

like. Wherein the mould surface is treated with a wrinkling, crumpling or a crackling paint composition followed by heat treatment.

47121. Messrs. Timboga Corporation. Improvements in or relating to prophylactics or contraceptives. Having on its external surface a large number of depressions or pockets.

47122. Messrs. Timboga Corporation. An improved sheath to encourage conception. Wherein the sheath is provided with one or more openings at or near its tip.

47123. Messrs. Timboga Corporation. Improvements in or relating to check pessaries or the like. Consisting of a ring with a coating dome shaped membrane having a rough inner surface.

47124. Wingfoot Corporation. Improvements in adjusting mechanism for brakes. Pawl engaging ratchet teeth on nut on an adjusting screw, advanced over the teeth as brake members are engaged.

47125. Union Carbide and Carbon Corporation. Gasshielded metal-arc welding. (February 4, 1952.) Arc formed at the end of a fusible metal wire electrode is shielded with a mixture of oxygen and argon, permitting use of oxygen concentrations.

APRIL 19.

47126. Dunlop Rubber Company Limited. Improvements in or relating to tools for removing tyres from wheels. (April 20, 1951.) Consisting of a flanged reaction lever having a hooked end, a tyre displacement member having hooked end portion similar to the lever, the lever and the displacement member being pivotable relatively to each other.

47127. S. A. De Procèdes Mécaniques Et Textiles Sapro. Improvements relating to carriers for condenser bobbins for spinning machines. The bobbins are arranged on individually extensible portions of the carrier so that each individual thread feed may be individually separated and spaced.

47128. O. Fromel. An automatic bobbin-changing motion for looms. A feeler is adapted to enter the shuttle and be deflected if the bobbin is empty so as to cause a transfer shaft to be coupled with and rotated by a reciprocating part thereby displacing a bunter into the path of the slay.

APRIL 21.

47129. Spencer Moulton Flexitor Limited. Improvements in and relating to rubber torsional shear springs. Comprising an open-ended rubber body between a rigid metallic shaft and an outer metallic shell.

47130. American Cyanamid Company. Improvements relating to the production of streptokinase and streptodornase by fermentation. (July 18, 1951.) The fermentation medium comprises a nutrient medium containing enzyme hydrolyzed casein, glycine, and a sulfhydryl reducing agent.

47131. American Cyanamid Company. Improvements relating to polymerizable and polymerized acrylonitrile compositions. (February 28, 1952.) Comprising acrylonitrile and one or more unsubstituted or substituted amino styrenes.

47132. Void.

47133. Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint Gobain, Chauny and Cirey. Process for improving the qualities of glass. Applying the external layer of the glass object a heat flux.

47134. E. Beer. Process and apparatus for renewing exhausted primary, more particularly dry, electric cells or batteries. Apparatus comprises an alternating current circuit, with rectifier, and means for feeding with current preponderatingly a.c. and the remainder pulsating d.c.

47135. Albion Motors Limited. Improvements in or relating to centrifugal oil cleaners. Drum with radially spaced nozzles and mounted on hollow spindle within drum on receiver rotated by reaction of jet of cleaned oil.

47136. Void.

47137. Societe Anonyme dite: Societe Generale Isothermos. Rotary pump for hydrodynamic lubrication. Driving shaft slide axially in its casing formed in pump body between two extreme positions wherein the oil intake duct of the bearing is in fluid connection with either of two oil delivery ducts.

47138. Societe Anonyme dite: Societe Generale Isothermos. Improvements in or relating to devices for lubricating and sealing axle-boxes. A large diameter collar, fixed endwise of the spindle, is provided with radial grooves the faces of which are inclined by 15° to 20°.

APRIL 22.

47139. Void.

47140. "Shell" Refining and Marketing Company Limited. Improvements in or relating to rotary regenerators. (April 24, 1951.) Providing redistributing means for increased mass flow through the matrix of cold gas of decreasing that of hot gas.

47141. Pyral. Process and apparatus for depositing on a flexible strip a narrow track of a coating medium. A strip is passed below a nozzle having a slit for passing the medium.

47142. Foster, Yates & Thom Limited. Improvements relating to powder feed mechanism for moulding presses. (May 3, 1951.) Consisting a roller adapted to be oscillated back and forth about its axis within a casing having powder feed and delivery branches thereon.

47143. Dunlop Rubber Company Limited. Improvements in or relating to rubber compositions. (May 4, 1951.) Comprising vulcanised natural or synthetic hydrocarbon rubber reinforced with a hardened phenolic resin and intimately incorporated therewith a polymeric compound.

47144. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to devices for reproducing colour-television images. Comprising cathode ray tube and means for line and frame-deflection of cathode beam, the tube including at least cathode, an accelerating anode and a field electrode, an image screen and a grid whose active surface consists of parallel wires located between the accelerating anode and the image screen.

47145. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to refrigerators. Condensation of gas at at least -155°C , this temperature being reached in one stage, on a wall of the freezer through which heat exchange with working medium occurs, the gas to be condensed being at about atmospheric pressure and the freezer having a collector for condensed medium at its lower end.

47146. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to refrigerators. Condensation of a gas at at least -150°C on a wall of the freezer through which heat exchange with working medium occurs, the

freezer being surrounded by a heat insulating screen and extending the whole length of the freezer and the screen is separated from the heat exchanging surface of the freezer by a subdivided space for the medium to be condensed.

47147. Mavor & Coulson Limited. Improvements in and relating to coal cutter chains. A working link formed with longitudinal spaced picks which are integral portions of the link.

47148. Ciba Limited. Process for the manufacture of tetrahydropyridine compounds. Cyclising Δ^3 -2-aryl-pentene-1, 5-diacids substituted in the 2 position by an aryl, alkyl, or amino-alkyl or functional derivatives or thio-derivatives thereof.

APRIL 23.

47149. K. N. Misra. An improved keyboard for typewriters and like machines for Hindi and allied languages. [Addition to No. 41185]. Numerals zero to nine are provided in one row in the upper case of second row from the top.

47150. Western Electric Company, Incorporated. Method of reducing 'skin-effect' loss in electrical conductors and composite electrical conductors having a reduced 'skin-effect' loss. (May 26, 1951.) Comprises an assembly of spaced elongated conductive elements like metal laminations having thickness less than 'skin-depth'.

47151. The General Electric Company Limited. Improvements in or relating to apparatus for measuring the frequency of alternating currents or speed. (April 24, 1951.) Including a tachometer generator, two resonant circuits and means responsive to difference of two voltages derived from the currents in said respective resonant circuits and arranged to give indication over a range of frequency.

47152. Birmingham Sound Reproducers Limited. Disc record supporting and releasing means for sound reproducing apparatus. (April 25, 1951.) Including a spindle formed with record supporting shoulder at one side of the junction of main part and offset part thereof, an inclined surface on a side of the spindle, a movable abutment member for rocking movement about

an axis member normal to the main part of the spindle and for up and down movement, a spring urging movable abutment member into the upper position and a keeper member for up and down movement in the offset part of the spindle.

47153. The Superheater Company Limited. Improvements in or relating to steam superheaters for locomotives. Separate regulator valve housing, superheated steam header and steam distributing channel fabricated of wrought steel plate and finger chamber or pockets of cast iron or steel or fabricated of wrought steel component welded together.

47154. Siemens Brothers & Co. Limited. Improvements relating to electrical control network. Of the kind comprising rectifiers and affording as regards the transmission of alternating current between input and output terminals high or low attenuation according to the polarity of the controlling bias voltage of said rectifiers.

APRIL 24.

47155. Void.

47156. G. Eberhardt. Swinging disk plough. Comprises a rear frame part carrying plough discs and a gauge wheels, and a front frame part carrying operating levers, both the frame parts being swingably connected to each other by a horizontally disposed longitudinal shaft.

47157. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to regenerator such as used in hot-gas reciprocating apparatus, comprising filling materials. Filling material attached to regenerator wall at evenly distributed points.

47158. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to devices comprising electron beam tubes. An alternating control voltage is supplied to the grid so as to vary the deflection of electron beam.

47159. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to shaft positioning mechanisms of the locking pawl type comprising locking pawls each individually operated by means of a selecting member. Separately movable pawl lifter cooperates with all the pawls and at one end position one of the pawls moved into operative positions by the selector without being hampered by the pawl lifter.

47160. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to lamp holders comprising two or more resilient bottom contacts. The lamp holder has two bottom contacts which extend through apertured base plate.

47161. Void.

47162. Void.

47163. H. W. S. Churchill and C. S. Schofield. Improvements relating to apparatus for dispensing pastes, liquids and other substances. (April 25, 1951.) Compressible washer has external form complementary to the shape of dispenser socket having the side wall of its bore of lobe scroll or eccentric cam form.

47164. Dunlop Rubber Company Limited. Improvements in or relating to protective footwear. (April 25, 1951.) Having a metal toe-guard with in toe-cap whose base edge is surrounded by upturned flange of metal base plate within sole.

47165. Rodi & Wienenberger Aktien-gesellschaft. Improvements in and relating to extensible chain bands, more particularly wrist watch bracelets. (March 6, 1952.) Made of hollow links and connecting links, which connect same in articulated manner so that they can be pulled apart and which pivot against spring action.

47166. Farbenfabriken Bayer. The manufacture of phthalocyanine dye-stuffs. (March 7, 1952). (Addition to No. 42542). Reaction is carried out in presence of alkali and solvent mixture having high dissolving power for sodium compounds of cobalt intermediate products, one components of solvent mixture being formamide or alkyl formamide.

47167. Texaco Develop Corporation. Improvements in or relating to radiation detectors. (May 10, 1951.) Comprises a plurality of parallel cathode plates, one or more apertures, one anode wire the spacing between plates ranging from $\frac{1}{8}$ in. to $\frac{1}{4}$ in.

APRIL 25.

47168. Void.

47169. Void.

47170. Void.

47171. Universal Winding Company. Improvements in or relating to winding machines. (February 5, 1952).

Means for supporting a package for rotation, means for winding yarn on the packages, and finding means, a knot tier and means for operating the knot tier.

47172. Bolidens Gruvaktiebolag. Improvements in and relating to the impregnation of wood. Wood and impregnating liquid surrounding it are subjected to successive cycles of higher and lower pressures than the pressure of air within the wood.
47173. The British Tabulating Machine Company Limited. Improvements in or relating to electrical storage devices. (January 3, 1952.) Comprises a pair of similar input windings, a pair of similar shift windings, a pair of similar output windings, the windings being such that the voltage generated in the output windings by change of flux in shift winding are in opposition.
47174. American Cyanamid Company. Improvements relating to apparatus suitable for the continuous treatment of synthetic fibres. (March 3, 1952.) Comprises a pair of spaced, converging liquid-treating rolls and a pair of spaced, converging drying rolls wherein the angle of convergency between the liquid-treating rolls at the take-off end and is greater than the angle of convergency between the drying rolls at the take-off end and means for driving the two sets of rolls.
47175. The Hot Bracken Breaker Company Limited. Improvements relating to tool bars for tractors for coupling ganged implements thereto. (April 26, 1951.) Front and back members for coupling at least two and one of ganged implements, connected by strut or tie into rigid structure and a three-point linkage system for mounting on a tractor for lifting or lowering movements.
47176. F. L. Smidth & Co. A/S. A method of removing excessive amounts of material from one or more of the components in a cement raw slurry. The coarse fraction following supplementary grinding is subjected to a supplementary flotation process and that the combined concentrate from the two flotation processes is fed to the cement kiln.
47177. E. Lawrence. Improvements in or relating to worm gear pumps. Worm wheel is axial plane of and rotatable by worm tapered to conform to curvature of wheel to the extent of at least two teeth, and a housing so shaped that crest of worm thread makes sealing contact with it.
47178. R. P. Sharma. Improvements in or relating to locking device for doors and windows. Comprising two parts, first part having a locking bolt within a housing and a hinged hasp thereon to engage a staple on the second part, the second part having a housing to engage the locking bolt and means for sliding and locking the bolt.
- APRIL 26.
47179. Council of Scientific and Industrial Research. Improvements in or relating to sugar-cane wax. Treating the wax with chromic acid, ammonium dichromate, alkali metal dichromate or chromate, alkaline earth metal dichromate or chromate, potassium permanganate or hydrogen peroxide.
47180. C. M. Sweet. Automatic high-speed printing telegraph system with narrow bandwidth. Channels are scanned by photo electric means and transmitted as electric pulses to be recorded by oscillographic means and reproduced in readable form at the receiving end.
47181. Adrema Maschinenbau, G.m.b.H. Improvements in impressing machines for address-printing and like printing plates. Type stamps are opposingly displaced by double armed levers, in which the double armed levers are driven through two inter-coupled displacing mechanism.
47182. Adrema Maschinenbau, G.m.b.H. Printing plate, especially address printing plate. Guiding edges provided on the longitudinal sides of the plates have recesses therein, the opposed recesses being staggered with respect to one another and having different lengths.
- APRIL 28.
47183. J. C. Gazdur. Improvements in electric repeater fuse cut-out. Wherein plurality of fuse wires are provided, one end of said fuse wires being connected to a common slip contact drum while other ends are connected to insulated segments of another drum.
47184. Societe Financiere D'Expansion Commerciale Et Industrielle S.A.

- "Sfindex". Portable protective respirator with electrostatic filter and radio-active ionizer for the separation of solid and/or liquid particles from air. Air entering the respirator through a radio-active ionizer, an electric field being transverse to the direction of air, and behind the ionizing chamber is guided by baffle surfaces on to serially-arranged similar electrode systems in the form of filter cartridges, each electrode system being of two metallic-strips with insulators therebetween, together coiled about a mandrel of circular cross section axially in the direction of air-flow.
47185. Herts Pharmaceuticals Limited. Improvements in and relating to aryl esters of *p*-amino-salicylic acid. (May 28, 1951.) By reducing an aryl ester of 2-hydroxy-4-nitro-benzoic acid.
47186. Parke, Davis & Company. Preparation of an erythro propane diol. (April 3, 1952.) Effecting the condensation of *p*-nitro-benzaldehyde with α -phthalimidoacetaldehyde.
47187. Parke, Davis & Company. Resolution of racemic propane diol. (April 3, 1952.) Forming an aqueous solution containing a water-soluble salt of the racemic diol together with a similar salt of the *d*-or-*l*-isomer and thereafter effecting fractional precipitation by basifying the solution.
47188. The British Thomson-Houston Company Limited. Apparatus for mechanically rectifying alternating currents. Synchronously driven oscillating member operating contacts timings of which are adjusted individually or collectively while apparatus is operating.
47189. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to colour-television cameras. Comprising a camera tube having a target plate and means for line and frame deflection of an electron beam for target plate scanning which is produced and controlled within the tube by a cathode, an accelerating anode, a field electrode and a grid provided between the accelerating anode and the field electrode.
47190. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to incandescent lamps comprising two filaments wires more particularly for car head lights. Directions of winding of the filament coils are opposite such that the filament ends extend along the same tangential plane.
47191. Ashley Accessories Limited. Improvements in or relating to electrical junction boxes and the like. (May 4, 1951.) Two parts housing terminals provided with conductor-entry and shutter means; selectively positioning the two parts entry for two, three or more conductors provided, other entry means being closed by shutters.
47192. Ciba Limited. Process for the manufacture of thioketopiperidine compounds. Converting functional thioderivative of 2-aryl-pentane-1,5-diacid into its cyclic thioamide unsubstituted at ring nitrogen.
47193. Unga Limited. Process for improving the baking strength of wheat, wheat flour or of intermediate products. Treating with formaldehyde or its polymer.
47194. Z. M. Burda. Improvements in or relating to machines for extracting oil from mustard and like oil-seeds. As oil seed passes the feed end of the machine to its discharge end it gets crushed between two rotating rollers.
- APRIL 29.
47195. Ford Motor Company of Canada, Limited. Door lock. In a latch employing a rotatable bolt and a ratchet, a manually operable control arm has an arm connected to a locking lever which extends through a slot in the flange of the lock plate, an arm of pawl also extending through the slot.
47196. T. Yamaguchi. A process for manufacturing sintered phosphatic fertilizer. Wherein the sintering of phosphate rock is carried out under addition of an alkaline salt.
47197. American Cyanamid Company. Improvements relating to the preparation of a product containing an alkali metal acid cyanamide. (September 18, 1951.) Heating 1 mol of calcium cyanamide, at least 1.5 mol of water and at least 0.8 mol of an alkali metal hydroxide at 60°-80°C at a pressure not above 9 inches of mercury.
47198. Societe Des Usines Chimiques Rhone-Poulenc. A new ester of para-aminosalicylic acid. (June 13, 1951.) (Addition to No. 45462). Reducing phenyl 2-hydroxy-4-nitro-benzoate under conditions precluding hydrolysis or reduction of the ester group.
47199. E. K. Cole Limited. Improvements in or relating to the manufacture of scanning coils for cathode ray tubes

or the like. In the form of two straight parallel sides joined at each end by parallel arcuate parts of the coil.

47200. American Patents Corporation. Process for the production of artificial filaments and fibres containing fatty substances absorbed by proteins before being spun. [Addition to No. 45347.]. Treating the protein solution with a fatty substance containing unsaturated fatty acids having at least three double bonds.

47201. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Water-soluble compound of theophylline and 3-aminomethylpyridine and process for the manufacture thereof. Reacting thio-phylline with 3-aminomethyl-pyridine.

47202. R. W. Hankin, and H. G. Osborne. Improvements relating to curtain suspension devices. Providing the track with a groove in which the shaped portions of a fixing bracket can be engaged.

APRIL 30.

47203. Elektrokemisk A/S. Contact arrangements for continuous self-baking electrodes in electric furnaces and methods of operating them in the manufacture of aluminium. Lower end of contact rod tapered and is surrounded above the baked zone by fusible electrode material.

47204. Meiners Optical Devices Limited. Improvements in or relating to apparatus for illuminating threads in spinning and twisting machines. A source of light located at one end of the frame projecting beams of light along a series of threads and reflecting the same by means of reflecting mirror having a glare-preventing surface.

47205. U. Niccolini. Improvements in, or relating to irradiation apparatus. X-ray tube emitting soft radiations, container of this X-ray permeable material and containing preirradiated colloidal solution of same chemical pure element as anticathode of X-ray tube and means for projecting axially forward the electromagnetic field in the colloidal solution.

47206. Aktiengesellschaft Oederlin & Cie. A device for production of centrifugally cast semi-finished products of metal. Comprising a mould of at least two parts with a die of at least two parts inserted, the die is arranged partly exposed for increased cooling.

47207. Ciba Limited. Substituted S-carboxyethyl- and S-sulpho-ethyl-1-benzylidene-thioisosemicarbazides and the preparation thereof. Reacting 1-benzilidene-thiosemicarbazide with a reaction ester of an alcohol.

MAY 1.

47208. Void.

47209. The General Electric Company Limited. Improvements in or relating to the manufacture of crystal contact devices. (May 3, 1951). Method includes fusing germanium on a refractory support in inert atmosphere, dissolving away the outer parts of the globule.

MAY 2.

47210. Firth-Brown Tools Limited. Improvements in or relating to multi-edge cutting tools. Having cutting edges with positive rake and clearance angles and having edges diving into parts and between the parts having non-cutting ramp-like surfaces.

47211. Firth-Brown Tools Limited. Improvements in or relating to cutting edges for cutting elements for cutting and abrading tools. (May 3, 1951). Step of upsetting from the surface of a sheet or strip blank parallel rows of spaced tongues with sharpened edges.

47212. The British United Shoe Machinery Company Limited. Improvements in or relating to methods and machines suitable for use in staking hides and skins. Work piece fed full width to treatment zone simultaneously subjected to multiple acute bending, to vary the tension progressively.

47213. The General Electric Company Limited. Improvements in or relating to apparatus for coating tubular fluorescent lamps. (May 3, 1951). Comprising a reservoir tank below the tube, a vacuum operated pump assembly and a controllable means for feeding suspension into the tube.

47214. Dominion Magnesium Limited. Spool or reel construction. Accepted on 25th October 1952. Comprising a unitary metal casting having a drum portion, an annular flange at one end of the drum portion, the other end being unflanged and a hub.

47215. The British Aluminium Company Limited. Improvements in or relating to electrolytic cells for the production of

aluminium. (May 4, 1951). The cathode is mainly composed of titanium carbide or zirconium carbide.

47216. A. S. Bhathena. Improvements in or relating to surgical beds, operation tables, examination tables and like appliances. Wherein the upper frame is spaced apart from the lower frame thereof instead of making direct contact with the latter.

47217. A. S. Bhathena. Improvements in or relating to surgical beds, operation tables, examination tables and like appliances. Wherein the upper frame has a leg section which can be dipped below the lower frame when required.

47218. Houdry Process Corporation. A method and apparatus for hydrocarbon conversion system having catalyst bed with gas lift. Wherein granular catalyst in hydrocarbon conversion is passed through confined paths from lowermost treating zone to the top by means of a gas lift.

MAY 3.

47219. Void.

47220. Void.

47221. Void.

47222. Void.

47223. Clyde Crane & Booth Limited. Improvements in devices for winding up electric conductors. Consisting in attaching an electric cable to a drum and winding it by the action of traversing the drum and imparting rotary motion.

47224. Anglo-Iranian Oil Company Limited. Improvements relating to the production of emulsifiable bitumens. (May 21, 1951.) Mixing bitumen with an addition consisting of an acid obtained by auto oxidation of dihydroxy fatty acid.

47225. Plasco Limited. Apparatus for automatically stopping a diecasting machine in the event of shot failure. Comprising a motor control, a switch control for motor, a slide valve for controlling air operation of plunger, means for actuating the switch, means adjustable on and movable with the plunger for rendering the switch, actuating means inoperative in normal stroke motions of the plunger.

47226. Four Oaks Spraying Machine Company Limited. Improvements in mobile, power operated machines for use in spraying liquid. Comprising a chassis mounted on wheels, a suction

pump and an internal combustion engine supported in tandem on the chassis and tanks for fuel and spraying liquid arranged in tandem.

47227. Jogendra Mohan Saha and Nahar Singh Jain. Improvements in or relating to surgarcane juice clarification for the manufacture of white sugar. Cane juice is treated with milk of lime to raise the pH to 6.4-7.4 and heated, stirred and again treated with further milk of lime and powdered calcium carbonate to raise the pH to 9.5, impurities filtered off and the filtrate is neutralised with phosphoric acid, heated, filtered and the clear solution is subjected to evaporation.

47228. The General Electric Company Limited. Improvements in or relating to crystal contact devices. (May 4, 1951.) Comprises an element of semi-conductivity crystalline material at least part of which has the form of a tapered body of revolution.

47229. L. W. Hallchurch. Improvements in or relating to compositions for use in killing weeds. (May 5, 1951.) Comprising weed killing substances, and adhesive and a wetting and/or dispersing and/or suspending agent.

47230. Void.

47231. A. Tarcici. Heating apparatus suitable for heating food or the like by the rays of the sun. The article to be heated is provided on a support and is heated by a parabolic reflector.

47232. Wheeling Steel Corporation. Improvements in or relating to precipitator collecting electrodes. Comprising two sheets of foraminous metal arranged in parallel relationship, at least one of the sheets having a plurality of elongated channels, the channels engaging the other sheet to space apart the bodies of the sheets.

47233. Chas. Pfizer & Co., Inc. Improvement in or relating to antibiotics. Cultivating strain # 4622-21 of streptomyces rimosus in an aqueous nutrient containing medium under aerobic conditions.

47234. Heizmotoren Gesellschaft mit Beschränkter Haftung. Improvements in or relating to apparatus for spraying or atomising fluids. Atomising by means of a pulsating exhaust gas stream of a reso jet tube characterised by a covering tube surrounding the exhaust tube which covering extends beyond the outlet of the exhaust tube.

MAY 5.

47235. V. R. Barve. Darkroom safelight. With a casing having lighting unit at one end and two frames for red and white glass respectively fixed together so that the joining angle forms a hinge pivotable on the casing, which switches over from red to white light and back, and arrangement on the white glass frame to help replace white glass by glasses of other colours.
47236. B. M. Gupta. A powder composition for a hot drink. Coating a mixture of waste tea and gram husks with a decoction of cloves, cinnamon, iron sulphate and stalklets and with Bismarck brown colour.
47237. D. J. Wadia. An adaptable grooved rubber ring. Having a base with two adjacent walls outer and inner, latter being shorter in height than the former and the two forming in between them a groove.
47238. A. Lee and E. Lieberman. Ice making machine and method. By causing water to freeze in tubes and freeing the same from the tubes on alternate phases of the refrigeration cycle and the ice column to be broken into pieces.
47239. N. V. Onderzoekings Instituut Research. Process and device for the treatment of threads with a liquid. The device comprises a trough with a false bottom, two thread guiding rollers above the false bottom a weir for keeping the level of the liquid above the underside of the rollers, and guiding members for the liquid to and from the space under the false bottom.
47240. Sun Oil Company. Separation of aromatics from gasoline or kerosene fractions. Introducing liquid charge into silica-gel bed, equivalent to 50-85% of "equilibrium amount" and displacing adsorbed aromatics by introducing aromatic hydrocarbon liquid desorbent boiling below 500°F.
47241. J. E. Fleury. Improvement in the treatment of semi-chemical and chemical pulp prepared from straws, corn, bamboo and/or bagasse. Addition alkaline oleate to the pulp.
47242. J. E. Fleury. Process for making semi-chemical and chemical pulp. Cooking with salt of humic acid.
47243. Wingfoot Corporation. Improvements in brake. Brake block movable in a housing which is adapted to contain liquid in contact with the brake block.

47244. Ruhrchemie Aktiengesellschaft. Process for the preparation of aldehydes. Cobalt carbonyl compounds suitable for catalysts in OXO synthesis are prepared by treating cobalt compounds, outside the reaction zone, with water gas at pressures of 20 to 300 kilos/sq. cm. and at temperatures of 50 to 200°C.
47245. Armstrong's Patents Company Limited. Improvements in or relating to telescopic hydraulic shock absorbers. [Addition to No. 43389]. In which at least one baffle is disposed within the reservoir or the bore of the cylinder head which communicates with the sealing gland extends in the form of a tube to a point in the liquid reservoir below the normal level of liquid therein.

MAY 6.

47246. S. M. Umrigar. Improvement in means for supplying the water to boilers raising the temperature of the feed water. Feed water supplied through U-tubes located in smoke chamber or chimney to space between furnace tubes.
47247. Void.
47248. Sharp & Dohme, Incorporated. Process for the preparation of gamma-hydroxy quaternary ammonium compounds and the compounds thus produced. Reacting gamma-tertiary amine with a compound of formule RX to obtain compound of formula $C_6H_5-CH(R)-CH(OH)CH_2-CH_2-NA(R')$ (X).
47249. Sharp & Dohme, Incorporated. Process for the preparation of phenyl cyclohexanes and cyclohexenes and the compounds thus produced. 3-(p-substituted phenyl)-cyclohexanes and cyclohexenes are prepared from 3-(p-alkoxyphenyl)-6-alkyl-6-cyanocyclohexen-2-one-1.
47250. Sharp & Dohme, Incorporated. Process for the preparation of cyclohexylphenyl methyl ketones and the compounds thus produced. Preparing cyclohexylphenyl methyl ketones of the formula $p-[AcO-(cyclo-C_6H_{10})]-C_6H_4-C(=O)CH_2$ halide from acetoxycyclohexylbenzenes.
47251. Sharp & Dohme, Incorporated. Process for the preparation of cyclohexylbenzyl methyl ketones and the compounds thus produced. Cyclohexylbenzyl methyl ketones are prepared starting from acetoxycyclohexylbenzyl diazomethyl ketones.

47252. Power Jets (Research & Development) Limited. Improvements in and relating to combustion devices. (May 7, 1951). Casing internally subdivided into a combustion chamber, inlet passageway, and an outlet passageway, with gas permeable heat storage and heat emitting mass in the passageway.

47253. Eli Lilly and Company. Method of producing erythromycin and acid addition salts and products resulting therefrom. Cultivating *Streptomyces erythreus* in medium containing carbohydrates, nitrogen and inorganic salts and recovering erythromycin.

47254. Globe Hoist Company. Improvements in or relating to vehicle lift. Pair of transversely spaced lift members and a pair of longitudinally extended frame supporting members.

47255. American Cyanamid Company. Improvements relating to the production of streptokinase and streptodornase by fermentation. (July 30, 1951). By adding to the fermentation medium between 1500 and 6000 parts by weight of a sugar for each 1000 parts of basic nitrogen material.

47256. Brij Nishesh Sharma. Railway carriage door switch (electric). Comprises a casing, spring loaded plunger, spring loaded knife contacts and guide plate.

47257. H. J. Elliott. Method of and apparatus for extraction of sulphur from sulphur ore. Heating sulphur ore with concentrated solution of calcium chloride or magnesium chloride and filtering off the molten sulphur by pressure filtration or by suction.

47258. The Singer Manufacturing Company. Rotary takeups for sewing machines. A single rotary element operable about a fixed axis and having a plurality of opposed elongated controlling edges for the needle thread to slide

MAY 7.

47259. Dipl. Ing. W. Degen. Process for the improvement of natural or artificial-filled foundation soil. By forcing of stable material especially stone rubble into layer of non-stable soil by means of shaking it down the soft soil.

47260. J. L. Wettlaufer. Interlocking building blocks. (May 8, 1951). Rectilinear body portion with grooves in one side and end and curtain wall extending longitudinally of other side of height greater than groove depth.

47261. Colgate-Palmolive-Peet Company. Liquid shampoo composition. Comprises at least one water soluble salt of a sulfated monoglyceride of higher fatty acids, an aqueous medium and less than 50 per cent. of urea.

47262. Les Usines De Melle, Societe Anonyme. Process for separating mixtures of acetone and methanol into their components. Mixture is fed to middle section and hot water delivered into upper section and heat supply is adjusted.

MAY 8.

47263. Imperial Chemical Industries Limited. Improvements in or relating to blasting explosives. (July 3, 1951). Comprises incorporating 5% by weight calcium sulphate therein.

47264. Council of Scientific and Industrial Research. A high speed recorder for use with infra-red spectrometers. Comprising means for displaying on a cathode ray tube the signal produced by the detector of infra-red spectrometer and means for recording the same on a moving photographic film at high speed, as a function of radiation falling on the detector.

MAY 9.

47265. Void.

47266. The General Electric Company Limited. Improvements in or relating to refractor members for lighting fittings. (May 10, 1951). Asymmetrical prisms with primary faces refracting light to direction of maximum intensity and secondary faces refracting a part of incident light to direction of lower intensity.

47267. Lovens Kemiske Fabrik Ved A. Kongsted. Method for the transforming of the keto group in monoketones of the cyclopentanopolyhydrophenanthrene series into an esterified hydroxyl group. Wherein monoketone is reacted with lithiumaluminium hydride in organic solvent and with an acylating agent.

47268. Lovens Kemiske Fabrik Ved A. Kongsted. Method for the production of saturated or unsaturated hydroxyketone esters of the cyclopentanopolyhydrophenanthrene series. Wherein a corresponding diketone having one keto group protected by enolizing is reacted with lithiumaluminium hydride and an acylating agent and protected keto group re-established.

47269. H. R. Nash. Improvements in or relating to clutches. Clutch plates secured to driving shaft and to wheel or second shaft coupled by movement of one of two co-operating threaded, worm or cam members.

47270. Pest Control Limited. Means for the application of insecticides. (May 11, 1951.) Gelatine capsule having contained therein a systemic insecticide dissolved in an inert solvent and also water and a plasticiser for the material of the capsule for preventing formation of cracks on the walls of the capsules due to dessication.

47271. Batfast Industrial Works. Improvements in or relating to hurricane lanterns. Air supply to air chamber of the burner is made through perforations provided on the chimney holding piece.

MAY 10.

47272. Director Technical Development, M.G.O. Branch, Army Headquarters, New Delhi. Improvements in or relating to moisture compositions particularly for use in packaging metallic stores. Dispersing lime hardened resin in a mixture of beeswax and mineral jelly.

47273. The Director, Technical Development, M.G.O. Branch Army Headquarters, New Delhi. Improvements in or relating to watch and instrument oils. Comprising mixture of ester of phosphoric acid and cresylic acid and ester of phthalic acid.

47274. Centrax Power Units Limited and R.H.H. Barr. Improvements in or relating to regenerative heat exchangers. (May 11, 1951). Heat exchanger has a heat transferring matrix through which gaseous fluids flow.

47275. W. Roth and S. R. Rich. Measuring apparatus and method therefor. The apparatus consists of an elongated strip, and the oscillation produced in the strip are damped by the liquid under test.

47276. Moebelfabrik Westfalia H. Rottmann. Machine for chipping waste wood for use in the manufacture of boards. (April 10, 1952). Chips with binders are pressed under high pressure and at high temperature and in the machine the support for cutting tools is provided in such manner that the straight edges of the cutting tools are disposed in parallel to the direction of the fibre in the wood.

MAY 12.

47277. The British United Shoe Machinery Company Limited. Improvements in or relating to machines suitable for treating hides, skins and the like. Workpiece from which flesh is removed is folded and discharged with a folded portion of the workpiece leading the machine having a surface over which spread out workpieces can be presented from the front of the machine.

47278. N. V. Philips' Gloeilampenfabriken. Improvements in or relating to devices for producing ultra-short waves. Provision is made of a resonator which is coupled with the other resonator or resonators and is in part located outside the envelope of the tube.

MAY 13.

47279. Harry Ferguson Limited. Improvements in or relating to hitch connections for connecting belt or the like driven apparatus to tractors. When the mill or like belt driven apparatus is raised above the ground the driving and driven pulleys are spaced sufficiently for non-driving of the mill.

47280. British Telecommunications Research Limited. Improvements in testing arrangements for wideband telecommunication systems. (May 23, 1951). Filters are provided in series with the Go and Return channels.

47281. E. V. Meyer. Method and apparatus for determining the air content in plastic concrete and similar plastic masses. A sample quantity is mixed with water in a closed container and shaken to displace the air which is measured. The ratio of the height of air column and the height of concrete mix gives the percentage of air.

47282. R. Rausing. Device for filling liquids into containers. Wherein filling is controlled by a magnetic valve operated by a switch which is worked by the liquid level in the container.

47283. Maatschappij Voor Kolenbewerking Stamicarbon N. V. Process for accelerating or completing exothermal chemical reaction. Two or more immiscible or difficulty miscible phases are supplied under pressure to a rotation chamber to cause mingling of the reaction components in order to accelerate or complete a subsequent reaction.

47284. The British Thomson-Houston Company Limited. Improvements relating to the control of a continuous sheet passing over rolls. (June 26, 1951). The detecting means is movable and is mechanically coupled to means positioning guide roll axis.

MAY 14.

47285. Void.

47286. Jai Prakash Gupta and Shiv Kumar Gupta. Safety razor. Wherein blade has means adapted to engage the handle to constitute a rigid razor of ordinary type.

47287. Void.

47288. Strong Cobb and Company, Inc. Anthelmintic compounds. Reacting hexylresorcinol with a compound of formula RCOX where R is aliphatic, cyclic or phosphoric acid radical and X is halide or other anionic acid group.

47289. Saurefabrik Schweizerhall. Process and burner for producing pigmentary metallic oxides. Contacting a plurality of streams of reaction mixture of vaporous metal halide and oxygen containing gas with auxiliary flames, internal and outwardly, of two separately introduced combustible and oxygen containing gases.

47290. The Colombo Commercial Company Limited and J. Bryden. Improvements in machines for drying tea leaf or the like. Comprises a plurality of perforated endless conveyors disposed one above the other wherein hot air leakage is prevented by means of a first baffle element and a second baffle element both extending across the width of the chamber, second element being adapted to make contact with the first element in an uninterrupted manner throughout the whole width of the chamber.

47291. Bell & Howell Company. Improvement in and relating to combined optical and magnetic sound translating apparatus. Comprising a carrier adapted upon movement to bring an optical or magnetic sound translating element alternatively into active position relatively to a sound record strip directed by a guide.

47292. C. Ohmes. Improvements in or relating to seed drills. Wherein the seed roller is interchangeable so that it may be readily removed and interchanged with another seed roller.

47293. Societe Anonyme Pour Les Applications De L'Electricite Et Des Gaz Rares—Etablissements Glaude-Paz & Silva. Method of forming a coating on the emissive materials of an electrode for gaseous electric discharge apparatus. Comprising of one or more poorly emissive refractory oxides.

MAY 15.

47294. Schering Corporation. Improvements in or relating to the manufacture of 16-hetero-substituted steroids. Reacting Δ^4 steroid having in 20 position a carbon atom linked to an electronegative group by unsaturated bond, with organic amine or thiol having active hydrogen atom.

47295. International Business Machines Corporation. Improvements in or relating to a delay circuit. (January 7, 1952.) Positive going pulses developed and connected to grid of triode; series networks of rectifiers and impedances between sources of negative and positive potentials and anode and negative potentials respectively; junction of two impedances connected to junction of first two rectifiers; load impedance between anode and positive potential source; output terminal connected to junction of second pair of rectifiers.

47296. Adrema Maschinenbau G.m.b.H. Address-printing plate made of a ductile material. At least the field of the plate to be stamped is provided at the one side with elevations to which grooves provided at the opposite side correspond.

47297. Adrema Maschinenbau G.m.b.H. Address-printing plate. The plate consisting of low-carbon sheet iron and has its longitudinal edges folded over for the purpose of stiffening the plate.

47298. Adrema Maschinenbau G.m.b.H. Address-printing plate. [Addition to No. 45630.] Impressions in the folded-over strip aligning with the insertion slots are arranged at the inner portion of the folded-over strip and extend only over a part of the width of said strip.

MAY 16.

47299. Void.

47300. The Coppee Company (Great Britain) Limited. Improvements in and relating to the carbonisation of coal and apparatus for use therewith. (March 21,

1952.) Subjecting coal fines to a treatment through vibrations ranging to 5,000 vibrations per minute.

47301. Harry Ferguson Inc. Drive mechanism for tractor-implement combination. Stub shaft, for outboard wheel, attached to the tractor axle in lieu of tractor wheel, supports tractor wheel for free rotation.

47302. G. Dolder. Evaporator for absorption type refrigerating systems. The evaporator has a woven layer of an absorbent and inert material with respect to the refrigerating medium.

47303. Imperial Chemical Industries Limited. Process for the manufacture of ethylene polymers and interpolymers (May 29, 1951.) Exposing ethylene to a source of penetrating radiation.

MAY 17.

47304. Void.

47305. C. P. Steeper. Artificial limbs. Comprising two co-operating parts, one part having a bearing for the second part, housing containing locking mechanism and means to operate locking mechanism.

47306. The Bradford Dyers' Association Limited. Improvements relating to the production of multiply fabrics and articles. Interposing an adhesive or potentially adhesive material between outer plies and then subjecting it to heat and pressure.

47307. The General Electric Company Limited. Improvements in or relating to electric filter circuits. (May 18, 1951.) Comprising a main transmission line and a stub line which comprises a plurality of sections of transmission line connected in series across the main transmission line.

47308. The General Electric Company Limited. Improvements in or relating to couplings for electromagnetic waves between coaxial transmission line and wire waveguides. (May 18, 1951.) Comprising a metal horn fitted to and diverging from the end of the outer conductor of the transmission line and having circular symmetry about the axis of wire wave guide and a sleeve of dielectric material on the wire waveguide.

47309. British Trimken Limited. Improvements relating to roller bearings. Cage ring of triangular cross section with apex portion directly inward towards

bearing axis and formed with open pockets for rollers, extending from one inclined face to the periphery.

MAY 19.

47310. Chitta Ranjan Bose. A machine for husking paddy or the like cereals. Comprising a roller having flanges at its two ends placed within a casing, the upper half of the casing being lined with abrasive material and connected to the lower half by spring loaded connecting means.

47311. Director, Technical Development, MGO Branch, Army Headquarters, New Delhi. Improvements in or relating to coating compositions for making fabrics resistant to solvents, and treating fabrics therewith. Reaction product of dibasic acid, polyhydroxy alcohol and fatty acid, modified with fatty oil.

47312. Void.

47313. Ford Motor Company of Canada, Limited. Vehicle body construction. Resilient retainer strip distorted when assembled to the roof trim panel and the adjacent roof rail to cause the retainer strip to tightly embrace them.

47314. Compagnie Francaise Thomson-Houston. Cooling arrangement for electronic tubes. (July 9, 1951.) Anode is cooled by causing heat generated therein to vaporise a liquid.

47315. American Cyanamid Company. Improvements relating to the production of acrylonitrile polymers and copolymers. (August 8, 1951.) Subjecting to polymerizing conditions in aqueous suspension having a pH of from 1 to 4 and a monomer concentration of from 1% to 10% at constant temperature within the range of 20° to 70°C.

47316. Combustion Engineering-Superheater, Inc. Improvements in or relating to process and apparatus for drying sewage sludge and similar materials. Floating the mixture of dried and raw material in a stream of hot combustion gas controlling the duration of the floating and returning a portion to the cycle.

47317. H. Behera. A process of manufacturing fibrated cement articles. By moulding from a plastic mass incorporated with hydraulic cement consisting of particles varying from 0.5 microns to 75 microns in size and bonded by the setting of the cement content.

47318. Societe Financiere Pour L'Industrie Metallurgique. Improvements in or relating to props or shores. Comprising pile of discs displaceable in axial direction inside the outer tube so that the pin when inserted through next insertion hole above the upper end of the inside tube may be passed between two adjacent discs.

47319. Prachi Industries Ltd. Improvements in or relating to toy cars and like toys. Spring propelled car breaks up into detachable parts by hitting against only obstacle.

MAY 20.

47320. Dewey & Almy Chemical Company. An improved wash blanket and method and means for printing materials such as woven and knitted fabrics. (July 3, 1951.) Comprises a working surface having a textile layer of synthetic filaments adhesively united to a cushioning layer made of elastically deformable material, both layer being impermeable to printing colours and water.

47321. S. K. Karanjia. Improvements in or relating to toothbrushes. [Divided out of No. 45965; anti-dated to October 5, 1951.] An extension of the brush head and an end of a handle are provided with mating spigot and socket elements.

47322. D. W. A. F. Rudroff. Improvements in methods and apparatus for cutting electrically conductive materials. Electrode forming the cutter member being maintained during the cutting operation in a predetermined close relation to the material to be cut.

47323. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De Saint-Gobain Chauny & Cirey Process and apparatus for the grinding and polishing of glass. Glass sheet is imparted a continuous translatory movement with respect to members exerting an abrasive action in which the members having dimension in the direction of displacement of the sheet glass is constant and the member is actuated with a periodic movement in closed directing curve.

47324. Davy and United Engineering Company Limited. Improvements in or relating to coiler drums for strip material. (May 21, 1951.) A coiled drum formed with a slot arranged to receive one end of the strip material to

be wound on the drum provided with a member for opening and closing the slot.

47325. Ronald Trist & Co. Limited. Improvements relating to magnetic transmissions. Second driven magnet mounted on same side of the first driven magnet.

47326. British Telecommunications Research Limited. Improvements in power feeding arrangements for telecommunication systems. (June 7, 1951.) Separate circuits are provided for power supply to the anodes and the cathodes of the repeaters.

47327. Standfast Dyers and Printers Limited. Improvements relating to the dyeing of textile materials. (May 26, 1951.) The material prior to entering the molten metal is treated with a mild oxidising agent.

47328. Void.

47329. V. E. DePenning. Stencil printing machine for textiles. Comprising an endless belt for the fabric, one or more printing appliances above the belt, means for raising or lowering the appliances and means for engaging and moving said belt at the end of a printing operation.

MAY 21.

47330. Void.

47331. Void.

47332. British Dielectric Research Limited. Improvements in or relating to electrolytic capacitors. (June 19, 1951.) Surface area of aluminium, alloy is increased by an etching pulsating current of high average density and suitable composition and concentration of electrolyte.

47333. National Research Development Corporation. Improvements in or relating to safety apparatus for steam boilers. (May 29, 1951.) Steam pressure required to open safety valve is reduced automatically by a float operated mechanism.

47334. C. E. Snell. Improvements in the manufacture of tea. (June 11, 1951.) Feeding the dried leaf into a mill comprising a plurality of beaters rotating in a perforated container for cutting the leaf.

47335. Bell & Howell Company. Improvements in and relating to electromagnetic head mounts for magnetic sound recording and reproducing apparatus. Part of end portion of support arm

for screwed head and carrier surface aligned and partly in contact with the arm made mutually divergent to provide angular adjustment.

47336. Wingfoot Corporation. Improvements in anti-skid mechanism for brakes. Wheel deceleration moves valve means to connect pressure cylinder and conduit connecting hydraulic brake.

47337. Ciba Limited. Process for the manufacture of Bis-(Substituted phenyl)-thioureas. Reacting an aniline with a phenylisothiocyanate or a substituted aniline with carbon disulphide or thiophosgene.

MAY 22.

47338. C. Barth. A machine for forming chapattis, puris and the like. Pressing dough between two rollers, one roller having the form of chapati or puri engraved on its surface to the depth of the required thickness.

47339. J. L. Wettlaufer. Apparatus for making interlocking building blocks. A mould box formed with reinforcing stepped portions patterned to create an interlocking bottom on a block to be formed in said box.

47340. Poudreries Reunies De Belgique S. A. Fuzes for land mines and like explosive devices. Comprising a casing obturated by a movable cover, a percussion rod controlled by the displacement of cover, non-metallic elastic members articulated at one end of the casing, means to move the percussion rod the striker of which strikes a primer.

47341. Poudreries Reunies De Belgique S. A. Land mine. Comprising a casing, an explosive charge, firing elements and a cover, both the casing and cover internally include radial ribs, a non-metallic elastic ring interposed between the ribs, each rib of the casing alternating with two successive ribs of the cover.

47342. K. Wernert. Improvements relating to rotary-piston engines, pumps, compressors and like machines. Housing of the machine is adapted to be displaced relatively to the rotary member by fluid pressure the source of which is either the machine itself or fluid pressure apparatus associated with it.

47343. Standard Telephones and Cables Limited. Improvements in or relating to equipment for storing electrical intelligence. (May 23, 1951.) Equipment for storage of intelligence including means

for continuously reading and restoring stored intelligence and means for modifying said intelligence during any transfer operation.

47344. Standard Telephones and Cables Limited. Improvements in or relating to equipment for combining different items of intelligence. (May 23, 1951.) For combining different items of intelligence comprising a plurality of groups of intelligence. Sources and equal plurality of synchronous reading devices and means for deriving a plurality of outputs.

47345. Standard Telephones and Cables Limited. Improvements in or relating to electric register and signalling equipment. (May 23, 1951.) Comprising registering equipment, having control means adapted to operate at interval and means for determining whether the control means shall influence the register.

47346. Standard Telephones and Cables Limited. Improvements in or relating to telephone subscribers message registers. (May 23, 1951.) Comprising a magnetisable track, a storage head, a read head and means intermediate the read head and storage head for adding to the total stored thereon.

MAY 23.

47347. Council of Scientific and Industrial Research. A gas carburettor. Air inlet, gas inlet and mixing chamber, gas inlet being constricted.

47348. Council of Scientific and Industrial Research. A microphotometer for rapid examination of spectrum plates or the like densitometric measurements. Comprising a spectrum plate scanned by image of a cathode ray spot, a photocell or photomultiplier cell for receiving the light transmitted by the plate and for deflecting the beam in another cathode ray tube through a highgain video-amplifier.

47349. I. Dayal. Improvements in or relating to advertisement kiosks. Holding a concealed removable bin therein.

47350. Standfast Dyers and Printers Limited. Improvements relating to dyeing of textile materials. (May 25, 1951.) Impregnating the fibre with an alkaline aqueous liquor, heating the impregnated fibres, and reacting with the liquor an organic ester.

47351. The Thrissell Engineering Company, Limited. Improvements in or relating to machines for performing cutt-

ing, creasing, printing and like operations on paper, cardboard and like materials. (May 25, 1951.) A chase carrying a forme, a presser member having a pressing surface adapted to be translated along the forme and to roll against the forme and a reaction surface.

MAY 24.

47352. Abdul Rasul Hashambhoy Alarakhiabhoy. Improved paint remover. Comprises stearic acid, lime, an alkali, vegetable oil, gum and water.

47353. Void.

47354. Rocla Pipes Limited. Improved method of applying pressure to the surface of newly formed concrete pipes or other newly formed concrete products. (June 29, 1951.) Applying fluid under pressure to surface having formed fluid-tight film by reacting organic colloid with calcium salt.

47355. Rocla Pipes Limited. Improved process for producing fluid-tight concrete. (June 29, 1951.) Reacting an organic colloidal solution with calcareous cement and/or with one or more metal salt solution therein.

47356. V. R. Girichandrappa. An apparatus to reduce tobacco into flakes for beedi industry. Cylindrical chamber provided with adjustable steel knives and rotor with shearing knives, each of the knives on the rotor inclined at an angle different to the following one.

47357. National Research Development Corporation. Improvements in or relating to fluid pressure engines of the uni-flow type. (May 29, 1951.) Admission valve apparatus with two valves arranged in series one of which is a piston valve varying cut-off by its rotational movement.

47358. National Research Development Corporation. Improvements in or relating to boilers. (May 29, 1951.) Water and steam chamber is in the form of a drum with external circumferential ribs.

MAY 26.

47359. V. R. Barve. Liquid soap-making pot. Having four parts, an outer compartment for liquid soap, an inner compartment for liquifying soap cakes, a water supply arrangement and a delivery unit.

47360. Imperial Chemical Industries Limited. New disazo dyestuffs. (May 25, 26 Patent/57.

1951.) Tetrazotising diāmino-N-substituted-benzaldehydes and coupling the product with two molecular proportions of 1-phenyl-3-methyl-5-pyrazolone monosulphonic acids.

47361. Societe Anonyme Pour Les Applications De L'Electricite Et Des Gaz Rares—Etablissements Claude-Paz & Silva. Gas absorbent material. (January 8, 1952.) It consists of at least one of the metals, tantalum and zirconium which has a coating of anti-emissive substance.

47362. C. W. Cheney and Son Limited and C. W. Cheney. Improvements in worm geared band clips. Downward tilt of the head-end of the worm forces automatically the flat base of the closed-on neck-supported tensioning washer.

47363. E. M. Arthur. Improvements in valve spring compressors or clamping devices. Independent clamping head with slidable gripping arms, and spaced apart by spring bowden cable with inner and outer members anchored to gripping arms, operating head formed as separated unit for moving gripping arms for clamping.

47364. Ciba Limited. Process for the manufacture of compounds of the steroid series with oxygen in the 11-position. [Divided out of No. 44395; ante-dated to January 8, 1951.] 8:9-unsaturated-7-keto steroid or an enol derivative thereof is oxidised to 11-oxo- or 11-hydroxy steroid which are reduced and finally the oxo group in 7-position being replaced by hydrogen.

47365. V. Schauburger. Method and apparatus for conveying gaseous and liquid media. Fluid is conveyed through pipes or troughs the cross-section of which forms an egg-shape.

47366. A. J. Fitzgerald. Method of preparing solutions of endocrine glands and other animal cellular tissues. Dissolving the tissues and forming a colloidal suspension by treatment with an aqueous alkali containing aliphatic sulfate or sulfonate as emulsifying agent.

MAY 27.

47367. Boots Pure Drug Company Limited. Phenanthridine compounds. (June 8, 1951.) Quarternating a 9-p-nitro or amino-phenyl-2:7-dicarbalcoxy amino-phenanthridine with a compound of the formula R X wherein R is alkyl or alkenyl radical and X is an anion and

converting the resulting quarternary compound into corresponding amino compound.

47368. Ciba Limited. Process for the manufacture of steroid polyenes. Reacting 7, 8-unsaturated steroid with bromine either below -30°C or in presence of acid binding agent and treating the products with zinc and weak acid.

47369. Void.

47370. (Mrs.) W. M. Waller and P. H. Waller. Improvements in and relating to copper-base alloys and the production thereof. (May 28, 1951.) Consisting of 4-22.5 per cent. Ni, 4 to 20 per cent. of Zn, 0.5 to 3.5 per cent. cadmium, and not less than 55 per cent. of copper, nickel not exceeding twice the quantity of zinc.

47371. The P. & M. Co. (England) Limited. Improvements in switch point protectors for railway lines. (June 4, 1951.) A back plate and a protector plate interengage by means of longitudinal channelling in one and a longitudinal ribbing in the other.

47372. Dunlop Rubber Company Limited. Improvements in circular trimming knives. (June 16, 1951.) A pair of rotatable circular trimming knives disposed with their axes relatively inclined the contacting face of one knife being dished while the other is chamfered.

MAY 28.

47373. Ruhrchemie Aktiengesellschaft, and Lurgi Gesellschaft für Warmetechnik m.b.H. Process for the separation of oxygen-containing compounds from their mixtures with hydrocarbons. Using a quantity of sodium hydroxide not higher than 20 per cent. in excess of theoretically required quantity.

47374. The Monotype Corporation Limited. Improvements in or relating to control mechanism for typographical photo composing machines. Comprising four pistons operated separately by perforations in a record strip, a pivoted three armed lever, each of two arms of which extends over a separate pair of pistons, an interponent carried by the third arm of the lever adapted to be variably positioned.

47375. Standard Telephones and Cables Limited. Improvements in or relating to radio antennae. (July 9, 1951.) Comprises a concave mirror, a compensating

antenna, an obstructing member to reduce the effect of reflection back to the mirror.

47376. Ciba Limited. Process for the manufacture of new tricyclic ketones. Dialkylamides of β -(1:6-dioxo-9-alkyldecalyl-5)-propionic acid is reached with a alkyl metal compound and the reaction product is then treated with a hydrolysing agent.

47377. Void.

47378. Alembic Chemical Works Co., Ltd. Improvements in or relating to a process for the manufacture of phenacetin. Reacting p-acetaminophenol with sodium hydroxide and ethyl chloride.

47379. Alembic Chemical Works Co., Ltd. Improvements in or relating to a process for the manufacture of o-nitro-phenol. Reacting phenol with sodium nitrate and sulphuric acid, subjecting the resulting products to steam distillation whereby o-nitro-phenol separates out in the distillate.

MAY 29.

47380. Ciba Limited. Process for brightening foodstuffs containing carbohydrates. Incorporating a small quantity of a compound which when dissolved in a solvent or when applied to a substratum show a blue to violet fluorescence in ultra-violet light.

47381. T. Perlman. Rolls for magnetic separators and magnetic separators employing such rolls. (May 29, 1951.) A roll for a magnetic separator with a scabrous surface.

MAY 30.

47382. Council of Scientific and Industrial Research. A process for the modification of cashew nut shell liquid. Heating the cashew and shell liquid at 160° - 300°C ., with an accelerator comprising a salt of iron, cobalt, nickel, boron or chromium.

47383. Void.

47384. Void.

47385. K. V. Karantha. Improved conical street light reflector. [Addition to No. 46578.] Characterised in that the central hole in the cup shaped piece is eliminated.

47386. W. Ritzerfeld. Improvements in or relating to filing cabinets. A box in

a cabinet, the box being provided with a number of compartments for accommodating forms, files and the like.

MAY 31.

47387. Wingfoot Corporation. Improvements in polyvinyl chloride plastic. Adding 5 to 25 parts of a wax to a plastisol of polyvinyl chloride plastic containing a blowing agent and heat treating the plastisol.

47388. Perfogit Societa per Azioni. Process and apparatus for the production of improved polymer products. Characterised in that the polymer product detained is caused to undergo decantation to eliminate any gaseous bubbles.

47389. American Cyanamid Company. Improvements relating to apparatus for driving continuous lengths of flexible elongated articles. (February 20, 1952.) A roll device having a feed-on end and a take-off end comprising a cantilevered rotatable hollow drying roll within which extends a hollow stationary cantilevered shaft fitted with a heating unit.

JUNE 2.

47390. B. V. Patankar. An improved automatic self-cleaning water closet. [Addition to No. 42122.] Consists of a self cleaning water closet having a spring loaded foot rest which foot-rest operates a three way valve for water circulation.

47391. Void.

47392. Void.

47393. Void.

47394. A. B. Tudor. Improvements in electrodes for galvanic cells. (June 7, 1951.) The cover for the electrodes consists of a thin-walled, flexible, perforated tube of vinyl polymer.

47395. Schlumberger Well Surveying Corporation. Apparatus for differential pressure responsive device whereby a signal indicative of the difference between a first pressure and a second pressure.

47396. Schlumberger Well Surveying Corporation. Improvements in or relating to apparatus for electrical logging of wells. Comprising means for passing electric current through surrounding formations, and means for establishing an electric field in one location thereof,

means for obtaining indications of potential difference between a reference datum and a place in the bore hole.

47397. Robert Bosch GMBH. Improvements in lubricating pumps. The cum track or disc which reciprocates the automatically controlled supply piston is arranged to move between two stops one of which movable to adjust the stroke.

47398. Sterling Drug Inc. Improvements in or relating to the preparation of acyl-amino diol compounds. (April 2, 1952.) Oxidising a 2-aliphatic carboxylic acyl-amino-1-(4-hydrocarbonylmercaptophenyl)-1, 3-propane diol by treating with a per-compound.

47399. Sterling Drug Inc. Improvements in or relating to the preparation of acyl-amino diol compounds. (April 9, 1952.) Reducing α -(aliphatic carboxylic acylamino)- β - ϵ - α -hydroxy-4-hydrocarbonylmercaptopropiophenone with an oxidizable aluminium alkoxide.

47400. Imperial Chemical Industries Limited. New disazo, dyestuffs. (June 6, 1951.) By tetrazotising a symmetrical diamine and coupling with 1-(sulphophenyl)-3-methyl-5-pyrazolone.

JUNE 3.

47401. Council of Scientific and Industrial Research. Chemical polishing of aluminium. Treating aluminium with nitric, phosphoric and acetic acids or their aqueous mixtures.

47402. Combustion Engineering-Superheater, Inc. Improvements in or relating to the method of and technique for a foundry installation. Preparing and assembling molds to cast soil pipe fitting and other metal parts.

47403. Combustion Engineering-Superheater, Inc. Improvements in or relating to cope stripper and cooling loop for mold assembling mechanism. [Addition to No. 47402.] Comprises in combination a mold car on a track coupled to a train, means for placing on each car an assembled mold, driving means for train of cars, cope stripper means, means supporting the cope independently of the drag.

47404. Price's Patent Candle Company Limited. Improvements in the manufacture of wax articles. (June 5, 1951.) Compressing pulverulent solid wax in a mould of desired shape.

47403. Walther & Cie Aktiengesellschaft. Improvements in and relating to furnaces for pulverised fuel. (February 5, 1952.) Wherein the ignition chambers are arranged on and parallel to the fire box.
47406. The British Drug Houses Limited. Improvements in or relating to the preparation of vitamin B₁₂ and of new intermediates in the preparation thereof. (June 7, 1951.) Reacting an aliphatic amine with vitamin B_{12b}.
47407. M. W. R. Capps, N. C. Capps and A. W. F. Capps. Improvements in heat-pump apparatus for providing heat for domestic and like purposes. (June 4, 1951.) Comprises an evaporator, a compressor and at least two heat accumulating devices.
47408. Estirajes Balmes S.A. System for drafting fibrous materials. (June 30, 1951.) Comprising the steps of feeding a strand of fibres to a first draft stage, restraining said strand from expansion at that stage and passing to the next draft stage.
47409. Cromford Colour Company Limited. Improvements in chrome pigments. (June 6, 1951.) Treating precipitated lead chromate with silica and alumina.
- JUNE 4.
47410. VOID.
47411. D. Narayanamurti and J. George. Improvements in or relating to building boards and moulded articles from wood or the like. Decayed wood is first disintegrated and then subjected to heat and pressure and moulded to boards.
47412. The President, Forest Research Institute and Colleges, Dehra Dun. A process for making a resinous composition from coconut or the like shells for making moulding powders, moulded articles, building or plywood boards and the like. Thermally treating finely powdered coconut shells or like with water in an autoclave.
47413. W. Hertig. Piston syringe, especially for medical use. (August 2, 1951.) Providing a cylinder which is enlarged at that part where it is connected to fittings.
47414. Imperial Chemical Industries Limited. Improvements in or relating to plastic articles reinforced with fibrous materials. (June 15, 1951.) Aromatic polyester reinforcing material is treated with a dyestuff and with a swelling agent.
47415. British Insulated Callender's Cables Limited. Improvements in protective coverings for electric cables, pipes and the like. (June 25, 1951.) Comprises two layers of rubber containing low temperature curing accelerator and sulphur.
47416. A Kreidler. Draw bench with one or more longitudinally moved draw trolleys. One or more carriages circulate on an endless chain with cooperating stops on the bench and carriage.
47417. A Kreidler. New or improved drawbench with a drawing chain rotating continuously in the same direction. At least two carriages each provided with tongs circulate on an endless track.
47418. A. Kreidler. New or improved drawing process and drawbench. Work subjected to an alternating bending action during reduction.
47419. Mahant Vasudev Das. Drawing water from a tank, well or the like. Comprising a belt or rope carrying buckets, a pair of tilting platform with rolling load on each platform.
47420. The Vitarama Corporation. Apparatus for projecting matched mosaic picture images. A plurality of projectors in position, a mask associated with each projector, each of said masks having a masking edge and a light-transmitting edge zone.
- JUNE 5.
47421. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to the drying of gases. (June 5, 1951.) A process for regenerating a drier comprises passing a stream of heated regenerating gas introduced at the top downwardly within the absorbent bed, passing a second stream of gas upwardly introduced at the bottom of the drier and withdrawing the streams of gas at an intermediate point between the top and bottom.
47422. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to the fusion welding of metals. (June 6, 1951.) Filler metal fed automatically to welding zone co-axially through the welding flame.
47423. Noranda Mines, Limited. Method of and apparatus for separating and classifying substantially spherical bodies into different size groups. Selectively diverting material rolling down a horizontally disposed rotating member having a frusto-conical interior surface.

47424. E. I. Du Pont De Nemours and Company. Improved herbicidal compositions. Containing in admixture with another herbicidally active compound, a herbicidal aryl alkyl urea compound.

47425. Merck & Co., Inc. Purification of vitamin B₁₂ concentrates. Treating solution with anion exchanger in presence of cyanide ions.

47426. G. A. Gibbons. Improvements in or relating to roof lights and ventilators. Comprising a transparent member extending over an aperture in the roof and means for supporting said member in spaced relation to the aperture.

47427. J. W. Lodowici. Improvements in or relating to the production of prestressed building elements. Separately made anchoring members are stressed by pulling and a separately made building element introduced in between them and the anchoring members relaxed thereafter.

47428. Aktiebolaget Separator. A method and device for continuous soap making. The material is successively passed through a plurality of consecutive circuits such as saponification circuit, graining circuit, first filling circuit and second graining circuit.

JUNE 6.

47429. Void.

47430. Potasse & Engrais Chimiques Societe Anonyme. Process for the manufacture of a stable complex fertiliser. Adding successively ammonia, ammonia and H₂ SO₄ and ammonia to product of reaction of phosphate and HNO₃.

47431. British Intercontinental Corporation. Improvements in or relating to the treatment of textile fibres and fabrics derived therefrom, for the purpose of increasing the resistance and conservation of the same. Material is impregnated with a nitric ester solution to convert remaining camphene into camphenolida and camphor, followed by a thermic treatment.

JUNE 7.

47432. V. R. Barve, Photo-copying accessory. Having (1) a board frame for fixing documents and having a base, (2) a camera-stand, (3) a camera-stand-base fixed at right angle to the board

base for backward and forward movements of the camera-stand and (4) photo-flood-lights.

47433. P. V. S. P. Rao. Preservation of cooked rice in different forms in hermetically sealed containers. Cooking raw rice along with other necessary ingredients in hermetically sealed containers.

47434. T. M. S. Pienaar. Improved air, gas or like fluid compressor. Comprising a fluid pump, a pressure tank and a liquid jet injector forming a closed circuit, the liquid during its passage through jet injector takes up air with which it is forced into the tank by the pump and in which tank the liquid and air separate, the liquid collecting in the bottom of the tank under the air which is compressed in the top of the tank while the liquid is drawn off for recirculation.

47435. The General Electric Company Limited. Improvements in or relating to luminescent materials and to electric discharge devices which comprise combinations of such materials with electrical means for exciting the materials to luminescence. (June 8, 1951.) Containing elements cadmium, lithium, silicon, oxygen and manganese.

47436. The General Electric Company Limited. Improvements in or relating to electrical pulse slicing arrangements. (June 8, 1951.) Comprising a pair of parallel-connected paths to which is supplied the pulse signal having N levels, means to clamp the most positive and most negative levels of the pulse signal, a potential dividing net work between the two paths, N-1 voltage slicers, and means to combine the outputs of the voltage slicers.

47437. The General Electric Company Limited. Improvements in or relating to electrical oscillation generators and to pulse reshaping apparatus utilising such generators. (June 8, 1951.) Wherein there are an oscillator valve having means to derive from the output of it a feed back signal, means supplied with synchronising signal adapted to supply phasing signal in dependence upon leading and/or trailing edges of the waveform of synchronising signal and means to add the phasing signal to the feed-back signal.

47438. Braithwaite & Co. (India) Limited. Improvements in and relating to screwing foundation piles. (June 18, 1951.) Each driving pinion is adapted

to follow the toothed contour of the drum by being made free to accommodate the departures from true circularity.

JUNE 9.

47439. Council of Scientific and Industrial Research. A process for the manufacture of a nitrogen-phosphorus fertilisers. Reacting phosphate rock with hydrochloric acid and mixing with ammonium sulphate.

47440. V. Silberstein. Inertia starter. (June 12, 1951.) Auxiliary drive turns engine below starting speed before clutch means between starter fly-wheel and starter pinion is engaged.

47441. E. K. Cole Limited. Improvements in or relating to radio or television apparatus energised by alternating current mains. (June 28, 1951.) Comprising a relay activated to close the leads between the apparatus and supply mains only when a relay energising means circuit is shunted between the live mains terminal and earth, the "neutral" mains terminal being connected to the chassis of the apparatus upon said activation occurring.

47442. L. F. Wiggins and B. K. Davison. Sugar-cane wax. (June 11, 1951.) Heating crude wax with hydroxylic solvent and absorbent materials, filtering and crystallising wax again filtering and melting filter cake to separate solvent from refined wax.

47443. The Pyrene Company Limited. Improvements relating to foam-producing apparatus. (June 15, 1951.) Adding gas under pressure to foam passing through a hose before it issues from outlet.

47444. The British Aluminium Company Limited. Improvements in or relating to electrolytic cells for the production of aluminium. (August 3, 1951.) Electrolysing current supplied by a lead composed of at least one of zirconium carbide and titanium carbide over that portion of lead in contact with molten metal.

JUNE 10.

47445. M. B. L. Mathur. An improved wastenot water tap. Each supply chamber communicates with an auxiliary chamber and a float valve in the passage between the auxiliary and the main supply chamber.

47446. Council of Scientific and Industrial Research. Improvements in or relating to ion exchangers from coal, peat, lignite or the like. Treating vegetable decomposition products with heavy tar distillate and heating to drying prior to sulphonation.

JUNE 11.

47447. The General Electric Company Limited. Improvements in or relating to arrangements for automatically flashing electric lamps. (June 12, 1951.) Comprises a grid controlled thermionic valve, electromagnetic switch and a multiple contact switch with a wiper.

47448. National Research Development Corporation. Improvements in or relating to reciprocating fluid pressure engines. (June 14, 1951.) Working space of cylinder communicates with a combined inlet and exhaust chamber through a combined inlet and exhaust port.

47449. Pilkington Brothers Limited. Improvements in or relating to the manufacture of opaque glass in ribbon form. (June 12, 1951.) Forming from a slow setting glass composition intersecting sets of ribs of thread like nature on the reverse face of the glass ribbon.

JUNE 12.

47450. Void.

47451. R. R. Laupman. An apparatus for printing sheets, films or lengths of textile material, by means of screen printing. Comprises two rotating spindles, one displacing the material to be printed and the other imparting reciprocatory movement to the squeegee carrier adapted to be lifted by cam disc.

47452. J. M. Gillott. Improvements in coke oven doors and door handling machines. (June 29, 1951.) Comprising extractor head, a contact member mounted on the head, a door-supporting member, a connection between contact member and supporting member and means to resolve relative motion between the head and the contact member.

47453. Ess & Key Limited, and A. A. Allen. Improvements in and relating to racquet presses. (July 31, 1951.) Stud is in the form of a loop higher at one end and lower at the other end housing therein outer ends of operating lever bent at its angles.

JUNE 14.

47454. G. & J. Weir Limited. Improvements in or relating to evaporating plants. (July 7, 1951.) Of the type in which vapour is compressed in a compressor from which it passes to the evaporator heating surface and transfer its heat content through said surface to the evaporating liquid.

47455. The Singer Manufacturing Company. Rotary take up for sewing machines. A thread take-up disc disposed in engagement with the crank member, the disc and crank member being provided with complementary interlocking surfaces.

47456. Unilver Limited. Improvements relating to the processing of animal and vegetable oils. (June 14, 1951.) Measuring difference between permittivity of oil at the beginning and during hydrogenation.

47457. G. W. Deodhar. Bleaching of decorticated tamarind seeds and starchy materials. Heating with water solution of sodium hydroxide of SO_2 in a closed vessel.

47458. Ganjanan Woman Deodhar. Improvements in or relating to tamarind seed powder. Treating decorticated tamarind seed with an organic solvent by the Soxhlet or counter current multiple contact method to remove oil and then grinding it.

JUNE 13.

47459. E. Wilbushewich. Method and apparatus for producing ice blocks. Refrigerant is evaporated outside the cell containing water as well as in a tube provided inside the cell.

47460. J. R. Geigy A.-G. Process for the production of fumigating agents in spiral form to combat pests. Making spirals from a homogenous mass of insecticide, starch, raw cellulose and an alkali nitrate.

47461. Chambon Limited. Improvements in or relating to squeegees for screen and stencil printing. (June 15, 1951.) Ink is applied on the fabric through a perforate mask by means of a squeegee having ink-carrying recesses wherein the contacting surfaces of the squeegee and the mask move relatively to one another in a direction transversely of the recesses so that the squeegee exerts a wiping action on the surface of the mask.

47462. Void.

47463. P. S. Subramanyam. A cheap prefabricated construction of industrial houses to suit Indian conditions. Wall panels built of hollow blocks with thin walls and built in pillars and filled with earth, reinforced concrete beams supporting roof slabs placed on pillars, door shutters fixed to walls and windows formed by sunshades.

47464. N. D. Bhargava. Improvements in or relating to chaff cutters. Cutting means comprises a steel cutter blade in helical form fixed to the rims of two end discs fitted on the main shaft.

47465. Dunlop Rubber Company Limited. Apparatus for trimming moulding spew from tyre covers. (June 16, 1951.) Comprising means for rotatably supporting a tyre cover, a pair of trimming knives, means for urging the knives together, means for rotating one of the knives and means for relatively moving the knives and a tyre cover.

47466. N. V. De Bataafsche Petroleum Maatschappij. Method and apparatus for stabilizing the flames of pre-mixing burners. Jet divided into partial jets whose discharge axes are at an angle with respect to each other.

47467. Maatschappij Voor Kolenbewerking Stamicarbon N. V. Process and apparatus for the specific gravity separation of mixtures of particles having different specific gravities by means of a suspension of magnetizable material. The sprayed off magnetizable suspension is separated into two fractions consisting of fine and coarse particles. The fine fraction is supplied to the thickener and the coarse fraction is passed to the magnetic separator for separation of the coarse impurities from the suspension.

JUNE 16.

47468. Council of Scientific and Industrial Research. Resins suitable for cation exchange. Reacting sulphonic acid of a polycyclic hydrocarbon with formaldehyde in presence of sulphuric acid.

47469. Standard Oil Development Company. Improvements in or relating to apparatus for the contacting of gases with solids. [Addition to No. 44811.] Comprising a reaction vessel, and a hollow casing having a burner and a

- cap member extending through the bottom wall of the said vessel and terminating within it.
47470. A. Giesl-Gieslingen. Devices for draft production in locomotive boilers. With at least one smoke-stack oblong in cross section and at least one exhaust nozzle opening discharging steam within an oblong circumscribed area.
47471. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to variable capacitors. Screw threaded inner electrode is arranged to be displaceable by having a spring which is primarily shaped on the form of V.
47472. Novo Terapeutisk Laboratorium A/S. Injectable insulin preparation with protracted effect and process for its production. Amorphous insulin prepared in presence of zinc, cobalt, nickel, cadmium, copper manganese or iron in such concentration that finished suspension contains $2 \times A \times 10^{-5}$ milliequivalents of metals per millilitre of suspension where A denotes number of international units of insulin per millilitre of suspension.
47473. Void.
- JUNE 17.
47474. Void.
47475. Automatic Telephone & Electric Company Limited. Improvements in telephone systems employing voice frequently signals. (July 6, 1951.) There is provided a link terminating set having an impulse responsive device responsive to a train of D. C. loop impulses to control the transmission of corresponding V. F. impulses.
47476. Automatic Telephone & Electric Company Limited. Improvements in telephone systems employing voice frequency signals. (June 28, 1951.) Includes at an exchange a four-wire terminating set, and a voice frequency receiver associated with that winding of hybrid transformer which is connected to network.
47477. Guest, Keen & Nettlefolds (Midlands) Limited and Acton Bolt, Limited. An improved screw or like nicking machine. (June 18, 1951.) Comprising a rotatable carried drum having blank receiving slots, feed means, a stationary saw member mounted in the machine so as to engage the heads of the blanks.
47478. Hammerwork Richard Nascher. A dowel gun for shooting steel dowels, bolts or the like into masonry steel girders, etc. Lock housed in housing detachably connected to barrel; after loading lock and barrel relatively axially displaced for cocking the gun.
47479. A. J. C. De O. Barros. A machine for printing fabrics. Comprises a pressure cylinder and a plurality of printing rollers having surfaces of gauze permeable to a colouring agent, said agent being fed internally in which printing rollers rotate against the pressure cylinder enveloped by the fabric.
47480. Ateliers De La Motobecane. An automatic centrifugal clutch applicable particularly to cycles with auxiliary motors. External drum coupled to motor and internal mechanism, coupled to wheel, comprising at least two centrifugal systems each formed by a weight pivoted at one end and pivotally connected near that end to a pivoted brake shoe forming a system of levers.
47481. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De Saint-Gobain, Chauny & Cirey. Improvements in or relating to electric resistance heaters. Heating elements formed of a plurality of electrical conductors connected in parallel to two terminals.
47482. Cooperatief Aardappelmeel-Verkoopbureau Der Vereenigde Boerenfabrieken. Process of fractioning starch. Cooling a solution of starch in a fractionating medium consisting of an organic liquid precipitating starch wherein the concentration of the organic liquid in water is below the concentration of a saturated solution at 23°C.
47483. H. G. Empson. Improvements relating to self locking screw threaded members. (February 20, 1952.) Void after publication. Die has on its working surface two or more negative uniform threads adapted to form self locking thread on the work blank by rolling.
47484. Standard Telephones and Cables Limited. Radio frequency transmission system. Comprising two parallel conductors the width of one conductor being greater than that of the other.
47485. Standard Telephones and Cables Limited. Microwave transmission systems. (Addition to No. 47484.) Having two parallel conductors, a body of lossy material forming part of the electromagnetic circuit.

47486. Standard Telephones and Cables Limited. Filter system for filtering microwave energy. (Addition to No. 47484.) Accepted on 13th February, 1953. Comprising two parallel conductors, the width of one conductor being greater than the greatest width of the configuration of the other conductor.

JUNE 18.

47487. Void.

47488. Tecalemit Limited. Improvements in air or gas filters. (May 26, 1952.) The filter has an outer casing, a central tube is coaxial with the casing, a filtering material is arranged in the casing and a perforated member is arranged near the opposite end of the casing.

47489. Graetz Kommandit-Gesellschaft. Improvements relating to high candle power lamps burning liquid fuel under pressure. Internal chimney is deep drawn in one piece and its upper edge is so shaped as to conform to the outline of the hood.

JUNE 19.

47490. The Firestone Tire & Rubber Company. Improvements in or relating to tread stitcher. (May 22, 1952.) A frame supporting a pair of carriages means to move said carriages simultaneously in opposite directions along said drum, a stitching head and a stitching disc.

47491. Dansk Industri Syndikat, Compagnie Madsen A/S. Machine pistol. Comprising a casing divided into two halves, the forward ends of which have conical surfaces over which the corresponding conical end of a lock nut is forced when the nut is screwed on to the barrel.

47492. C. O. Christiansen. Improvement in rotary furnaces. Device for introducing or removing fluids comprising a stationary ring member having at least one peripherically extending groove and sealing means in slidable and fluid tight contact with furnace wall.

JUNE 20.

47493. Void.

47494. John Kerr and Company (Manchester) Limited. Improvements in or relating to the production and use of foam for fire-fighting and fire prevention purposes. Having therein agent or

agents which decrease its solubility in water-soluble liquids.

47495. Cavitron Corporation. Method and means for removing material from a solid body. Engendering at the area of contact a relative oscillation of high frequency and minute amplitude and having a major component of the movement in the direction of application of said tool, a liquid suspension of abrasive material is interposed in between the tool and the article.

47496. United States Steel Corporation. Electric resistance heating of material in continuous processing lines. Comprises two transformers connected in phase relation and one end of secondary connected to conductive rolls.

47497. Wingfoot Corporation. Improvements in safely tire construction. Means for locking a diaphragm in place between the tire and rim.

47498. Wingfoot Corporation. Improvements in foamed rubber latex sponge. Containing polybutadiene and not less than 10 per cent. by weight of natural rubber.

47499. Bowden (Engineers) Limited. Improvements in and relating to flexible hose couplings. A flexible hose with inner and outer tubular layers of resilient material such as rubber and a tubular layer of flexible reinforcing material embedded between them and an end fitting.

47500. Polygram Casting Co., Limited. Improvements in method of making casting moulds. (June 23, 1951.) A moulding mixture is pressed to a pattern which is heated and becomes invested with a coating of moulding mixture, moulding a reinforcement round the edges, and removing the coated pattern from the mixture after which the coating is cured for further exposure to heat.

47501. Polygram Casting Co., Limited. Improvements in or relating to method of and apparatus for producing casting moulds. (June 13, 1951.) Heating a pattern to cause setting of resin constituent of a mixture, coating the heated pattern with a substance to facilitate removal of the finished moulded article pressing the heated and coated pattern into the mixture, under pressure, withdrawing the pattern from the mixture, curing the coating by further exposure to heat.

47502. Polygram Casting Co., Limited. Improvements in or relating to moulding mixtures. (June 23, 1951.) Moulding mixture consisting of a thermosetting resin in powder form, hardening agent, and sand, the sand used being a mixture two or more sands having different fineness.

JUNE 21.

47503. Void.

47504. Fulmer Research Institute Limited. Improvements relating to low emissivity coatings for metal surfaces. Comprising 5 to 30 per cent. of enamel frit and 95 to 70 per cent. of a low emissivity refractory material in the form of particles of 0.1 to 0.001 mm. size.

57505. Spooner Food Machinery Engineering Company Limited. Improvements in or relating to the baking of food products in an oven. Projecting the gaseous heating medium in spaced jets towards the food product and circulating said medium in a closed circuit at a volume rate of flow per minute which is a substantial multiple of the total volume of the medium in the circuit.

JUNE 23.

47506. "Shell" Refining and Marketing Company Limited. Improvements in and relating to lubricating compositions. (June 25, 1951.) Comprising mainly a mixture of a liquid ester having the general formula $R'OOC.R.COOR''$ where in R is a divalent saturated aliphatic hydrocarbon radical and R' and R'' are alkyl, aralkyl, or cycloalkyl radicals of more than 2 carbon atoms and from 2 to 30 per cent. by weight, a polymer of an ester of acrylic or 1-alkyl acrylic acid.

47507. Pierwood Plastics Limited. Improvements in injection (plastic) moulding machines. (July 30, 1951.) Providing means to stop machine at the end of a moulding operation, means to remove moulded article from opened die and means to restart the same.

47508. Tootal Broadhurst Lee Company Limited. Process for the treatment of fabrics with resinous condensation products. (June 27, 1951.) Impregnating textiles in a solution of uruaformaldehyde resin-forming ingredients wherein the proportion of formaldehyde to urea is greater than 1.6:1 and heating in less than 10 per cent. of dry steam.

47509. Societe Des Usines Chimiques Rhone-Poulenc. Process for the production of phenols and carbonyl compounds. (May 1, 1952.) Decomposing the hydroperoxide of an alkyl aromatic hydrocarbon with sulphuric acid in presence of phenol to be formed in the reaction or a mixture of phenol and less than 10 per cent. of a carbonyl compound.

47510. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in the Production of phenols and carbonyl compounds. (May 1, 1952.) Reacting hydroperoxide of an alkyl aromatic hydrocarbon with perchloric acid at 30-65°C in presence of phenol to be formed in the reaction.

47511. N. V. Philips' Gloeilampenfabrieken. Improvements in electro-mechanical vibrators comprising magnetostrictive members. Of substantially radially symmetrical form which is placed in a polarising field extending parallel to the axis of the member consisting of highly permeable non-conductive material such as ferrite and having a winding for causing torsional vibration.

47512. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of manufacturing casting moulds or pressing moulds. Object obtained from a model of the product to be manufactured in the mould by dividing it into parts and providing spacers between them, being applied with a hard layer from which a portion is removed, so that after the object is removed and the parts are joined, a space is left having the shape and dimensions of the object to be manufactured.

47513. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a cathode-ray tube. Compressing a cathode ray tube having at least a cathode, an accelerating anode, a collecting electrode and two grids between the later mentioned, the solid parts of the second grid being centrally behind the apertures of the first grid.

47514. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to devices for the reproduction of coloured television images. Comprising cathode ray tube and means for line and frame deflection of cathode ray beam, the tube including luminiscent screen, a cathode, an accelerating anode and a field electrode.

47515. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to

- devices for transmitting television images. Comprising camera tube, means for line and frame deflection, the tube having at least a cathode, an accelerating anode, a field electrode, two grids between the latter-mentioned and a colour filter of strips of different colour absorptions inside or outside the tube in the path of the rays.
47516. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to stock cathodes and discharge tubes comprising such stock cathodes. The wall of the supply chamber consisting at least in part of a porous member of one or more of the metals tungsten, molybdenum, tantalum or zirconium sintered to a high temperature, the chamber containing alkaline earth compound such as barium boride.
47517. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to ferromagnetic material or ferromagnetic bodies and methods of producing such material. Starting from a mixture of at least 14 mol. per cent. nickel oxide, at the most 36 mol. per cent. zinc oxide and about 50 mol. per cent. iron oxide or alternately from a mixture of compounds yielding such a mixture upon heating, causing to react by sintering at least twice at a temperature higher than 1,100°C such that the pore volume exceeds 10 per cent., then cooled, this series of operations being repeated.
47518. J. Foster and Company Limited, and J. Foster. Improvements in or relating to tractor-borne power driven cutting tools. (December 19, 1951). Forwardly extended tool mounted for power displacement about axis at right angles with provision for adjustment of the axis of rotation of cutting tool.
47519. Polygram Casting Co. Limited. Improvements in or relating to apparatus for making casting moulds and cores and parts thereof. (August 30, 1951.) Comprising a vessel pivoted on a stand about an axis disposed between the centre of gravity of vessel and its upper open end, operable clamps mounted at opposite sides, a handle for turning the vessel about its pivot, clamping arrangement being provided with the pattern plate.
- JUNE 25.
47520. Void.
47521. The Singer Manufacturing Company. Sewing needle clamp. A needle-bar having a flat bottomed needle-shank receiving slot at one end, a movable needle-clamping member and means limiting the movement of the clamping means.
47522. Gulf Research and Development Company. System and method of applying cutting liquid. (December 31, 1951.) Directing thin high speed jet of cutting fluid to impinge upon the tool close to the cutting edge of the working tool.
47523. Wisconsin Alumni Research Foundation. Improvements in or relating to rodenticide composition. Comprises an alkali metal salt of a 3-substituted-4-hydroxycoumarin in combination with an inert carrier.
47524. Valite Corporation. Process of preparing pulp from pith-containing plant materials and product produced thereby. [Divided out of No. 45830; ante-dated to September 11, 1951.] Digesting pith containing fibrous plant materials in hot alkaline liquor containing caustic soda.
47525. Luvo Limited. Improvements in destruction appliances, and in particular projectiles, including a hollow charge. Cavity of the hollow charge filled with gas at higher than atmospheric pressure.
47526. Luvo Limited. Improvements in projectiles containing an explosive in the form of a hollow charge. Projectile having two eliminatory hollow charges one behind the other, the detonator means being arranged to ignite exclusively the rear hollow charge.
47527. Noranda Mines, Limited. Rotary drum apparatus and means for preventing material being treated from accumulating thereon. Comprising a drum provided with a flexible sheet material secured at its peripheral portions.
47528. PERFOGIT Societa per Azioni. Process and apparatus for melt-spinning of high polymers. The polymer is pre-heated and then fed into a melting zone through a measured feeding device.
47529. Jyoti Prakash Sircar. Improvements in or relating to electric fans. A pinion fixed to the extended shaft of the motor end engaged on large fixed bavel pinion secured to the bracket base.
47530. A. G. Desai. Electric Vulcanizing machine. Comprising a stand having an upper arm through which passes a pressure spindle and a lower arm carrying plates with heating element and a thermostatic control mechanism.

47531. Lanova A.-G. Improved valve gear for internal combustion engine (November 7, 1951.) Void after publication. Valves suspended in cylinder head actuated by cranked lever valve rockers in gear housing and running parallel to cylinder axis; tappets acting on pressure screws on rockers actuated by cam-shaft.

47532. Lotus Industries. Improvements in or relating to sewing machines. On the hook shaft is mounted a hook adapted to hold the bobbin seat, said seat being mounted in pressed position by a spring loaded disc, said disc being engaged by a casing, the bobbin having a lug which engages the casing of the disc to prevent the bobbin seat from rotating.

47533. Void.

JUNE 26.

47534. Wingfoot Corporation. Improvements in gas filters. Filter element includes mat of strands coated with poly-ethelene.

47535. Void.

47536. Tootal Broadhurst Lee Company Limited. Process for the treatment of textile materials, especially fabric with resinous condensation products (June 27, 1951.) Cellulose textile fabric is impregnated with melamine-formaldehyde or mixed melamine-formaldehyde urea-formaldehyde resin forming ingredients and then heating the resin in an atmosphere of at least 10 per cent. dry steam.

47537. H. E. Cornish. Improvements in or relating to folding perambulators. (July 4, 1951.) Comprising a pair of rigid frames having stub shafts and wheels cross bars attached to opposite frames and a seat pivotally held at each side.

47538. Ward Blenkinsop & Company Limited, and Howards & Sons Limited. Production of meso-substituted azacridines. Comprises heating an azacridine with primary amine.

47539. Perfogit Societa per Azioni. Process and apparatus for the spinning of high polymers. Polymers containing in their molecule a CO-NH or CO-O group regularly repeated are spun by conveying the liquid stock from a central point to a plurality of spinnerets along various pipe lines without interposition of any decantation apparatus.

47540. Edeleanu Gesellschaft m.b.H. Improvements relating to the selective extraction of hydrocarbon oils. Recovering solvents (liquid SO₂ and light hydrocarbons) by cooling the distilled condensate to about -20° to -30°C and separating the layers formed.

JUNE 27.

47541. Manindra Lal Sen Gupta. Improvements in or relating to looms. A weft feeler, a selector device and a cop-feeler, the weft feeler being biased to move said selector device when there is no weft across the slay thereby actuating a feeder to load a fresh cop.

47542. Mechanical Products Inc. Improvements in and relating to electric switches. Flexible element provided to be energised when the movable contact is moved by the actuator plunger.

47543. Fairwest (U.K.) Limited. Improvements in or relating to circular looms. (June 29, 1951.) Providing an auxiliary cam adapted to rotate in predetermined relationship to that of shuttles and to disengage the heald from its main cam.

47544. Fairwest (U.K.) Limited. Improvements in or relating to circular looms. (June 29, 1951.) Each heald being connected by a pair of hooks the movements of which are effected by their alternative engagement with a reciprocating knife.

47545. Fairwest (U.K.) Limited. Improvements in or relating to circular looms. (June 29, 1951.) Shuttle being provided with means whereby the length of weft extending between the stop motion device and fell of cloth is increased beyond normal.

47546. Beyer Peacock & Company Limited and J. Hadfield. Improvements in or relating to locomotives or tenders having means for mounting water tanks fuel bunkers, or the like containers. (July 19, 1951.) Comprising a water tank, fuel bunker which are mounted on supporting structure by means of which relative movement between the container and supporting structure is attained.

47547. The Loewy Engineering Company Limited. Improvements in and relating to tool-supporting means for billet extrusion presses. (July 4, 1951.) Providing in an extrusion press supporting means for the tools separate from the container.

47548. The Loewy Engineering Company Limited. Means for adjusting tools in radial extrusion presses. (July 4, 1951.) One tool of the tool unit atleast has a back stop which is normally resilient and can yield to outwardly directed displacement of the tool unit.

47549. Standard Oil Development Company. Sulphur dioxide extraction process. Each of raffinate phase and extract phase is fractionated in reboiler type fractionator and hydrocarbons subjected to caustic washing treatment.

47550. A. J. A. Asplund. Improvements in grinding apparatus for fibrous, granular and pulverulent materials. Characterised in that stationary grinding members is adjustably mounted in second support facing first support spaced to accommodate driving pulley and bearings for shaft.

47551. J. Ferrier and J. Boue. Improvements in methods of lining walls, in particular concrete walls. Lining element coated with a layer of a material capable of incrusting into material of wall secured in position with the layer in intimate contact with the wall.

47552. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to derivatives of phenthiazine. (May 15, 1952.) By the conversion of meta-substituted diphenylamine by known methods for the conversion of a diphenylamine into N-(tertiary-aminoalkyl)-phenthiazine.

47553. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to phenthiazine derivatives. (May, 15, 1952.) Reacting sulphur at at least 140°C with diphenylamine substituted in the 3-position by a lower alkyl or lower alkoxy group.

47554. Imperial Chemical Industries Limited. Rubber antioxidants and their application. (July 16, 1951.) Incorporating into rubber before curing normal and basic aluminium, barium, calcium, magnesium, strontium and zinc salts of α -bis-(2-hydroxyl-3:5-dialkyl-phenyl) alkanes.

JUNE 28.

47555. Perfogit Societa per Azioni. Process and apparatus for the melt-spinning of high molecular weight substances. Heat is imparted to the polymer by dielectric loss, that is, by subjecting the polymer to the action of high frequency oscillating field.

47556. O. S. Penn. Improvements in or relating to tipping vehicles or dumpers. Transverse axle frame supporting tippable body swivelled for steering or tipping purpose controlled by irreversible mechanism.

JUNE 30.

47557. Societe Dees Usines Chimiques Rhone-Poulenc. Improvements in or relating to the production of 2:4-diamino-5-(4'-chlorophenyl) - 6-ethylpyrimidine. (June 9, 1952.) Condensing guanidine with ethyl-2-(4'-chlorophenyl)-3-pentanone-oate, chlorinating the product obtained and treating the chlorinated product with ammonia.

47558. The Anil Starch Products Ltd. Chemical treatment of bags to retard their deterioration when used for packing superphosphate. Soaking hessian bags in calcium acetate solution and thereafter drying.

JULY 1.

47559. Void.

47560. K. K. K. Pillai and A. V. Gelder. Process and apparatus for cracking cashew nuts. Projecting the nuts in a continuous stream against an impact surface at such a velocity as to cause the nuts to crack.

47561. Tecalemit Limited. Improved lubricating systems. (August 10, 1951.) Injection unit comprising metering device and means for receiving lubricant from supply line before fed to metering device from which it is discharged to place of use.

47562. Garringtons Limited. Improvements in or relating to rock boring tools. (July 5, 1951.) Comprising peripheral recesses which are provided on the connecting portion of the tool and adapted to align with the ends of the peripheral flutes on the rod and having the same cross-sectional area as that of the adjacent rod flute ends.

47563. The Loewy Engineering Company Limited. Improvements in and relating to double-acting billet extrusion presses. (July 12, 1951.) Extrusion press having at either side of its container unit with balancing means in the form of pressure-loaded hydraulic thrust bearings.

47564. Standard Telephones and Cables Limited. Improvements in or relating to direction finding systems with remote indication. (July 24, 1951.) Comprises

a direction finding station producing plurality of electrical quantities jointly, a remotely located direction indicating arrangement and a plurality of rate-of-impulse telemeter means.

47565. E. B. Higgins and A. E. Read. Improvements relating to the treatment of textile materials for protection against biological attack. (July 2, 1951.) Coating textile materials with a compound obtained by heating pentachlorophenol, phenol and phosphorous oxychloride.

47566. Algemene Kunstzijde Unie N. V. Device for regulating speeds of rotating bodies and members driven by means of rotating bodies. Individual motors asynchronous three-spase current motors with slip-ring rotor, the stators of which are connected to the three phase net work and the rotors of which are coupled to each other via electrical differentials.

47567. Void.

JULY 2.

47568. G. Casati and C. Cazzaniga. Improvements in and relating to circular looms. (July 20, 1951.) Shedding the warp threads by meshes arranged in groups in a box, initial shedding being effected by a selection device preceded by a feeler combined with means to stop the loom when the thread is broken.

47569. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to welding electrodes. (July 3, 1951.) Comprising a wire core, a mesh like sheath and consisting of an inner layer of at least three wires disposed longitudinally along the core and one or more outer layers each formed of at least one wire helically coiled about the inner layers.

47570. The English Electric Company Limited. Improvements in and relating to operating gear for adjustable propeller type blades in hydraulic turbines or pumps. (August 1, 1951.) Crank arms of radial pivots of blades linked to hydraulic servomotor cylinder slidably arranged in hub member at free end, piston being fixedly connected the member.

47571. Wingfoot Corporation. Improvements in planter wheel tire. Including an annular base portion of shallow inwardly arched shape transversely and a contiguous tread portion of shallow

outwardly arched shape providing a cross section that is substantially concavo-convex.

47572. N. V. De Bataafsche Petroleum Maatschappij. A method of and apparatus for atomizing liquids. Causing the liquid to be atomized to impinge on a stationary disc near its centre and to flow as a continuous film outwardly beyond the said disc into a zone protected.

47573. Void

47574. Void.

47575. Ciba Limited. Process for the manufacture of new pyridazones. Taking 2-aryl-pyridazone-(3) compounds which in the 6-position carry a substituent convertible into an amino group and converting said substituent into amino group.

JULY 3.

47576. R. H. Mistry. Improvements in or relating to pulleys. A unit of two runner pulleys of which one has a greater inside diameter than the other, mounted on a common axle, on the same plane so that the adjoining flanges are in contact with each other.

47577. Tecalemit Limited. A pressure-limiting arrangement, particularly applicable to pumps, compressors and similar apparatus. (June 13, 1952.) A discharge member opens at the moment when the maximum pressure is reached providing a large passage for the fluid and allowing the total delivery of the pump to be discharged at a very small pressure.

47578. American Cyanamid Company. Improvements relating to new methods of preparing substituted amides and peptides. (August 15, 1951.) By reacting together a tetralkylpyrophosphite, a mono- or poly basic carboxylic acid and a primary or secondary amine hydrogen or an acid addition salt thereof.

47579. American Cyanamid Company. Improvements relating to new method of preparing substituted amides and peptides. (October 15, 1951.) By reacting together a dihalophosphite, a mono- or polybasic carboxylic acid and a primary or secondary amine having amine hydrogen or an acid addition salt thereof.

JULY 4.

47580. Council of Scientific and Industrial Research. Preparation of a composite protein food. Reacting protein with alkali and adding vitamins and or minerals to the product.
47581. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to apparatus using, treating, storing or conveying inflammable or explosive fluids. (July 6, 1951.) Comprising a preformed body having an uninterrupted wall formed of a porous material pervious to the fluid and surrounding a space within said body.
47582. Belliss & Morcom Limited. Fluid-controlling valves. (July 6, 1951.) A closure member of channel section and having in its channels loading springs.
47583. Void.

JULY 5.

47584. Void.
47585. The Director, Indian Institute of Science, Bangalore. Improvements in and relating to the manufacture of Bis-(4-aminophenyl)-sulphone. Reacting 4-acetaminobenzene sulphonyl chloride with acetanilide in presence of inert solvent and metallic chloride.
47586. Void.
47587. Void.
47588. T. S. Saggi. A carpenter's drill. On the upper face of the drum is mounted a cup comprising outer ball race fitting on the spindle, a slave engaging the spindle above the drum, a cone mounted on the spindle and a handle engaging the sleeve.
47589. The A. P. V. Company Limited. Improvements in distillation columns. (July 11, 1951.) Superposed perforated plate structures are provided and each structure has a seal trough.
47590. The British Thomson-Houston Company Limited. Improvements in and relating to protection for voltage control devices. (July 26, 1951.) Associated with a polyphase A.C. system in which partial failure of a three-phase voltage transformer from which the reference voltage is drawn provides a system of unbalance voltages resolvable into its positive, negative and zero phase sequence components.
47591. E. K. Cole Limited. Improvements in or relating to electric transformers. (July 21, 1951.) Transformer

supported on U-shaped bracket of polymethyl methacrylate or like insulating material.

47592. The Pyrene Company Limited. Improvements in foam-producing apparatus. (July 11, 1951.) Air is delivered to a foam mixing space from an internal combustion gas-turbine engine which also drives a pump delivering liquid to the foam mixing space.
47593. Dunlop Rubber Company Limited. Improvements in brakes. (July 7, 1951.) Pad comprises a layer of high frictional material and a backing material which indicates when the layer is worn away.
47594. Void.
47595. Void.
47596. Karamchand Premchand Limited. Process for the manufacture of isonicotinic acid. Oxidising crude 4-ethyl pyridine with potassium permanganate to form a potassium salt of isonicotinic acid and converting said salt to isonicotinic acid.

JULY 7.

47597. Council of Scientific and Industrial Research. A process for the preparation of basic aluminium sulphate. Adding to aluminium sulphate or alum an alkali and a stabilizing agent comprising an aliphatic organic acid or hydroxy acid.
47598. A. S. Patel. Improvements in or relating to the manufacture of ice-candy. An inner container having depressions on its panels is slipped in partly filled outer container lowered in brine.
47599. Chhote'll. Unsinkable boat. Comprising wooden plank supporting a number of air containers enclosed within a metal cover which forms a wall surrounding the seats for passengers, and which is filled up with light mortars.
47600. Elektrokemisk A/S. Improvements relating to electric smelting plant and processes employing such plant. Comprising a smelting pot mounted for rotation about a vertical axis, and a single vertical electrode suspended from above and coaxially with the axis of rotation and extending into the pot.
47601. D. W. Shimwell. Improvements relating to looms with automatic cop loaders. Means to ensure when weft supply in the shuttle is exhausted and a short length of weft is laid in the

- cloth being woven, and re-loading of the shuttle taking place when the first pick of the shutting with the new cop is in the same shed as the short length of weft.
47602. The Distillers Company Limited. Manufacture of acrylonitrile. (February 21, 1951.) Divided out of No. 46454. (Ante-dated to December 29, 1951.) Reacting acrolein with ammonia and molecular oxygen at 420 to 600°C. in the presence of an oxidation catalyst.
47603. The Distillers Company Limited. Manufacture of unsaturated aliphatic nitriles. (April 17, 1951.) (Divisional date December 29, 1951.) Subjecting at 250-600°C. to the action of ammonia and molecular oxygen in the presence of oxidation catalysts an unsaturated aldehyde or alcohol.
47604. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to circuits for use in automatic signalling systems. Outlets of selectors of last group stage are connected directly to outlets of selectors of first selecting stage.
47605. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to glow-discharge tubes. Auxiliary anodes extend parallel to the anodes, slightly spaced apart from the cathodes at the side of indents in the cathodes.
47606. National Research Development Corporation. Pesticidal coating compositions. Dissolving in lacquer solvents a plasticised organic solvent soluble aminoplastic resin and one or more organic solvent soluble pesticidal compounds together with an acidic hardening agent or accelerator, and applying the final composition before gelatinisation to a surface.
47607. British Telecommunications Research Limited. Improvements in or relating to telecommunication systems. (July 11, 1951.) Using alterations in the frequency of signalling current, integration of signals obtained from a frequency-sensitive network is effected by the use of a capacitor shunted by an inductor forming a circuit turned to the lowest frequency to be received.
47608. Mannesmann Aktiengesellschaft. Improvements relating to synthesis furnaces for the catalytic hydrogenation of carbon monoxide. Wherein a plurality of nests of cooling tubes with independent inlets and outlets are arranged one above the other and in association therewith a gas inlet.
47609. Deutsche Kohlenbergbau-Verwaltung. Process for the conveyance and utilisation of coal. Inferior grade coals are crushed dispersed in water using wetting agents and the pulp is conveyed through pipes and finally centrifuged or filtered to get coal.
47610. Ciba Limited. Process for the manufacture of methylamines. Reacting trimethyl colchicine acid, the methyl ether thereof or its iso-compound with an aldehyde, then with methyl halide.
47611. Void.
47612. Void.
47613. Void.
47614. Dwijendra Nath Chaudhri. Improvements in or relating to guards for fans. Comprises a front and a back ring and a set of continuous spaced connecting braces extending from the back to the front ring and wires spacedly wound along the braces to form a web and a passage formed in the guard for inserting or removing the fan blade.
- JULY 8.
47615. Void.
47616. Void.
47617. Void.
47618. N. V. De Bataafsche Petroleum Maatschappij. Process for preparing potassium nitrate. Adding potassium chloride and nitric acid to a solution left over from a previous cycle of the process, and crystallising potassium nitrate, the concentration of hydrogen ions in the mother liquor being at least equal to the sum of the concentrations of K and Cl ions and at most 1.3 times the concentration of chloro ions.
47619. Standard Oil Development Company. Improvements in or relating to processes for producing catalytic gels. Reacting metal with an anhydrous aryl alcohol, hydrolyzing the alcoholate and calcining.
47620. Johnson and Phillips Limited. Improvements in or relating to sealing glands. (July 9, 1951). Tubular surround with packing material and a split bush with means to cause split bush to grip sheath of cable and the gland.
47621. American Cyanamid Company. Improvements relating to the purification of aureomycin-containing material. (October 2, 1951). Reacting at a pH not exceeding 3 with amionic organic sulfuric acid derivative.

47622. The McPhar Engineering Company of Canada Limited. Apparatus for investigating a solid capable of being caused to exhibit magnetostrictive properties. Including means for creating a mechanical wave in the solid and means for detecting the characteristics of the wave propagation.

47623. AB. Tudor. Improved method and apparatus for making micro-porous separators for electric accumulators and cells. (May 8, 1952.) A network of threads or fibres is embedded in the material of the separator sheet the threads being of insulating electrolytically resistant material.

47624. W. Ritzerfeld and G. Ritzerfeld. Improvements in or relating to rotary duplicating machines. Comprising in combination a moistening device tiltably mounted and feeding pump, both controllable in dependence on the printing drum.

47625. Societe De prospection Electrique Procedes Schlumberger. Improvements in tools for taking samples in particular inside bore-holes." Comprising an operative tube having at its front end cutting teeth.

47626. Ciba Limited. Improvements relating to the protection of cellulosic fibrous material from attack by micro-organisms. Treating fibres with a solution or emulsion of aminoplast and a hardening accelerator, removing the excess liquid, and converting the aminoplast into water-insoluble condition without completely removing the water from the fibres so as to effect the condensation in the presence of water.

JULY 9.

47627. P. C. Mistry. Improved method of an apparatus for inflating the pneumatic tyres of automobile (Addition to No. 44286). The compressed fresh air from a compressor is used and automatic controller and distribution device are used to start and stop the compressor.

47628. D. M. King. Improvements in or relating to chains. (July 10, 1951.) Which is made up of a plurality of links each comprising a pair of strip like elements adapted to be secured together in overlapping relationship by means of connecting pins.

47629. Dunlop Rubber Company Limited. Brake disc assemblies. (July 25, 1951.) Brake assembly comprises a wheel hub and a brake disc integral with it.

26 Patent/57.

47630. Imperial Chemical Industries Limited. Improvements in and relating to the manufacture of water gas. (July 25, 1951.) Water gas manufactured by circulating a burden of carbonaceous material between a blow vessel and a make vessel and maintaining the material in a fluidised condition and thereby carbonising and gasifying.

47631. Void.

47632. Parke Davis & Company. Preparation of an aminopropane diol. (June 18, 1952.) Reduction *in situ* of the aldol condensation product of p-nitrobenzaldehyde with α phthalimido-acetaldehyde.

47633. W. J. Netelenbos, M. Otger and J. G. Robbenhaar. A spindle for a spinning or twisting machine. Spindle being provided with members protruding from the spindle surface near the upper end of the spindle the members overlapping each other in the longitudinal direction of the spindle.

47634. Wheelerweight Limited. Improvements in or relating to mobile lifting trucks. (July 18, 1951.) Means provided to interpose weighing apparatus between chassis and in unitary assembly including the load engaging means and means for raising the same.

JULY 10.

47635. P. F. Ghadialy. Improvements in and relating to a device for manufacturing cage-pinions. Comprising in combination, of an index drilling jig, a cage assembly press, a wire inserting means, and a cage rivetting means.

47636. "Shell" Refining and Marketing Company Limited. Improvements relating to apparatus for supplying liquid. (July 12, 1951.) Means for withdrawing from the main container comprises an eductor, an auxiliary container connected through a non-return valve, means for isolating the supply source and a duct connecting the auxiliary container through a control valve.

47637. The General Electric Company Limited. Improvements in or relating to directional street lighting fittings (July 11, 1951.) Refractor panel arranged adjustably relative to light source with locating means for effecting displacement to different positions.

47638. Transart Aktiebolag. Display device. (July 21, 1951.) Including at least one transparent sheet which is rendered rigid and hinged, at one edge.

to a rigid support carrying a coating element of the composite representation.

47639. Chas. Pfizer and Co., Inc. Improvements in or relating to carbomycin. Cultivating *streptomyces halstedii* or an equivalent carbomycin producing organism in an aqueous nutrient medium.

47640. Saurefabrik Schweizerhall. Process for the production of purified anhydrous zirconium tetrahalide. Intimately mixing the crude solid anhydrous zirconium tetrahalide with an organic substance which carbonizes in presence of the crude halide at a temperature below the sublimation point of zirconium tetrahalide and then heating the mixture to vapourize pure zirconium halide.

47641. Wingfoot Corporation. Improvements in method for making belts. Forming a sleeve of unvulcanized rubber, shaping the same into a plurality of mutually parallel corrugations and severing the sleeve at the corrugations.

JULY 11.

47642. Void.

47643. The General Electric Company Limited. Improvements in or relating to the generation of electrical oscillations in waveguides. (July 12, 1951.) Comprising a length of waveguide curved into the form of a plane arc, exciting means producing at the beginning of the curved length of the guide oscillations in E mode having maximum electric intensity perpendicular to the plane of the arc.

47644. General Rendering Limited. Method of separating the components of composite substances or materials. (August 11, 1951.) Void after publication. Grounding the matter by subjecting to physical shock and washing with simultaneous piercing liquid jets.

47645. Ruhrchemie Aktiengesellschaft. Process for the production of mixed phosphate fertilizers. Raw phosphate is decomposed with sulphuric acid and the product is reacted with double sulphate of potassium.

47646. Ruhrchemie Aktiengesellschaft. Process for the production of sodium phosphates from sodium sulfate. Sodium sulphate is treated with equivalent superphosphate, calcium sulphate is filtered off, and the solution is neutralised with soda or sodium hydroxide to give disodium and trisodium phosphates respectively.

47647. Ciba Limited. Manufacture of metalliferous azodyestuffs. A monoazodyestuff is treated with an agent yielding cobalt or chromium.

47648. Void.

JULY 12.

47649. S. Abdulla. Improvements in or relating to clocks, time pieces and watches. Two sets of hour and minute hands are provided, one set indicating the local time and the other set the corresponding Greenwich time.

47650. E. Munekata. Improvements in or relating to a method for manufacturing mixed gas of hydrogen and nitrogen. Burning industrial waste gas containing nitrogen and oxygen and an excess of a gas rich in hydrogen in a reactor kept above 200°C, and washing and retaining the product.

47651. The Renold and Coventry Chain Company Limited. Improvements relating to driving and conveying chains. (July 18, 1951.) Formed by two strips bent in a U and a short chain link joining the two strips and composed by two short plates joined by pins or rivets.

47652. The General Electric Company Limited. Improvements in or relating to apparatus for manufacturing synthetic jewels. (July 13, 1951.) Having means for passing a stream of gas carrying the constituent material of the jewel in powder form, means for fusing the constituent material and a support member on which jewels are progressively crystallised.

47653. R. E. Eagan Limited. Improvements in or relating to shell roofing. (July 13, 1951.) Comprising a span constituted by a plurality of curved shell units of precast concrete assembled together end to end.

47654. N. V. De Bataafsche Petroleum Maatschappij. Improvements in or relating to biocidal compositions. Comprising 10-75 per cent. of biocidal solid; 10-50 per cent. water-immiscible liquid; 0.25-25 per cent. emulsifying agent and 10-40 per cent. water.

JULY 14.

47655. President. Forest Research Institute & Colleges, Dehra Dun. Improvements in or relating to preparation of copper chlorophyll from leaves plants. Dry leaf powders of Indian Stinging Nettle is mixed with aqueous copper sulphate, extracted with alcohol and

phaeophytin separated which is again mixed with copper sulphate solution and extracted with alcohol.

47656. Void.

47657. The General Electric Company Limited. Improvements in or relating to thermionic cathodes. (July 25, 1951.) Electron emissive material consisting of a mixture of alkaline earth tungstates with alkaline earth oxides.

47658. E. I. Du Pont De Nemours and Company. Photographic film elements. Comprising a support in the form of a thin sheet having a layer of a tri-component copolymer and a water-permeable colloid layer and also containing one light-sensitive silver halide stratum.

47659. E. I. Du Pont Nemours and Company. Preparation of oriented coated films. Applying to a film of a highly polymeric ester of a dicarboxylic acid and a dihydric alcohol, a thin coating of a copolymer of vinylidene chloride with vinyl or vinylidene compounds and then orienting the film.

47660. American Cyanamid Company. Improvements relating to vinyl resin articles and treatment thereof. To reduce tendency to accumulate static charges on vinyl resin articles, applying on the articles a volatile liquid containing a quaternary ammonium compound and drying.

47661. Koppers Company, Inc. Improvements in or relating to coal hydrogenation process. By effecting hydrogenation at a high through-put and low consumption of hydrogen, such that major portion of the fraction boiling above gasoline is heavy oil.

47662. T. J. Smith & Nephew Limited. Improvements in and relating to surgical casts or the like. (July 26, 1951.) Comprising honeycomb sheet material layer between two inner and outer layers of settable fabrics.

47663. Pilkington Brothers Limited. Improvements in or relating to the manufacture of hollow blocks of glass. (July 16, 1951.) Upwardly extending rims of glass blocks are heated to their softening point and then are tilted so that the soft rims off the lowermost adjacent rim parts meet and the half blocks then roll on to one another.

47664. Etablissement Sopitex. Improvements in or relating to machines for carrying out washing, rinsing, mixing stirring or like operations. A vertically rotating agitator presenting a smooth

surface which includes a convexity and a concavity mating together.

47665. Smith and Westwood Limited, and V. H. Westwood. Improvements in and relating to drill bits. Three outer cutting limbs and an auxiliary cutter placed intermediate to the three outer limbs.

47666. Void.

47667. Void.

47668. Void.

47669. Mavor & Coulson Limited. Improvements in endless belt conveyors. Comprising long frame carrying belt-supporting rollers carriage therein and pulleys, on carriage on which a belt is led, forming delivery means displaceable as a carriage component.

JULY 15.

47670. Void.

47671. G. Mastracchi-Manes. Slider for sliding clasp fasteners. Comprises two halves for operating a sliding clasp fastener consisting of two sectional strips guided one within the other, one strip having a pincer like section and the other a head section, the two being in mutual gripping engagement.

47672. Void.

47673. Void.

47674. T. J. Smith & Nephew Limited. Improvements in and relating to surgical casts or the like. (August 2, 1951.) Wherein corded structure is located between two similar layers of settable fabric.

47675. Ab Ferrosan. New biologically active condensation products of diphenylmethane type and a process of making the same. Condensing formaldehyde with an aromatic hydroxy acid of the formula $(OH)-Ar(R_1R_2R_3)$ or $(OH)-Ar-(R_1R_2R_3)$ or both wherein Ar is a benzene or naphthalene ring, R_1 is H, OH, SO_3 , H, halogen, Cn alkyl, NH_2 , NO or alkoxy radical, R_2 means same as R_1 , as also COOH, and R_3 is COOH or SO_3H .

47676. Ab Ferrosan. New biologically active triarylmethane derivatives and a process for their preparation. Reacting a diarylmethane derivatives with an aromatic compound of the formula $Ar(RR_2R_3R_4)$ in the presence of a mineral acid and an oxidizing agent wherein R and R_2 means H, OH, SO_3 , H, halogen, alkyl, alkoxy, acyloxy, acylamino, alkylamino, NO_2 or CN, and R_3 means same as R_2 or COOH, aryl,

aralkyl, sulfonamide or sulphone and Ar means a benzene or naphthalene core.

47677. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of spontaneously dispersible solutions of fat soluble vitamins. By dissolving fat soluble vitamins and one or several emulsifiers in a water-free water miscible solvent.
47678. Societe Anonyme Des Manufactures Des Glaces Et produits Chimiques De Saint Gobain, Chauny & Cirey. Method of and apparatus for shaping or bending and tempering sheets of glass. Placing the glass sheets in pliable condition in between to shaping elements with interposed continuous surfaces in between the glass sheet and the shaping elements.
47679. Comptoir Industriel D'Etirage Et Profilage De Metaux. Improvements in or relating to hot piercing of metal billets. Piercing metal hot work piece in a cylindrical container by a mandrel, using a layer of a glasslike lubricating material over the top.
47680. Fabric Development Company, Limited. Improvements connected with the treatment of fibres, pile of pile material and pile fabrics. (July 24, 1951.) Supporting the pile in a slab of consolidating medium, applying a reinforcing substance to the protruding pile ends and subjecting the opposite surface and the adjacent pile ends to suction.
47681. P. Baron. Improvements relating to lids or covers for containers. A lid for a container hingedly connected with a wire ring adapted closely to surround and grip the container.
47682. The General Electric Company Limited. Improvements in or relating to thermionic cathodes. (July 16, 1951.) Electron emissive material formed by heating intimate mixture of finely divided tungsten and alkaline earth oxides.
47683. H. W. Burrington. Improvements in or relating to refrigeration systems. Indirect control of capillary tube is effected permitting operations at other than design conditions.
47684. Chas. Pfizer & Co., Inc. Penicillin salts with an organic base. Treating penicillin with disubstituted ethylenediamine.
- JULY 16.
47685. Void.
47686. G. Hollo. Spring and inner spring construction. (July 24, 1951.) Void after publication. Interconnected series of at least two elements of continuously wound superimposed turns with adjoining series of elements wound in opposite directions, the elements being formed by folding a belt of interconnected coils of continuously coiled spring wire having adjoining coils coiled in opposite directions.
47687. N. V. De. Bataafsche Petroleum Maatschappij. A process for converting mercaptans present in gasoline or kerosine into disulphides. (November 28, 1951.) Intimately contacting the gasoline or kerosine by mechanical means with alkali solution in the presence of oxygen at ambient temperature.
47688. The Colombo Commercial Company Limited, and J. Bryden. Improvements in and relating to drier trays. Stiffening means being provides at one surface of the tray with fixture elements at longitudinally spaced intervals.
47689. Dunlop Rubber Company Limited. Printing medium and multi-colour printing method. (August 2, 1951.) Comprising a flexible backing material having an absorbent printing surface and bearing thereon a film of a plastic composition which is pigmented to form a pattern in reverse.
47690. Quebec Metallurgical Industries Ltd. Improvements in reduction of metal, oxides. (September 1, 1951.) Reacting with a reducing agent consisting of carbon and a non-carbonaceous material capable of reducing metal oxides.
47691. General Railway Signal Company. Improvements in and relating to code communication system for centralized traffic control systems for railroads. Code communication apparatus for transmitting to control office distinct indication codes for identifying stations by operation of relays according to character of the code elements.
47692. Ciba Limited. Process for the manufacture of bis-(substituted phenyl)-thioureas. Causing an aniline to react with a phenylisothiocyanate or causing a substituted aniline to react with carbon disulfide or thiophosgene.

47693. W. Ritzerfeld and G. Ritzerfeld. Improvements in or relating to rotary duplicating machines. Maintaining an operative connection between a mechanism for adjusting the printing pressure and a mechanism for adjusting the feed of liquid to the moistening device.

JULY 17.

47694. Imperial Chemical Industries Limited. Improvements in or relating to a method of isolating protein from protein containing material. (September 26, 1951.) Aqueous solution of vegetable globulins brought to pH 3.5 and alkali added to bring the mixture to the isoelectric point.

47695. Imperial Chemical Industries Limited. Improvements in or relating to a method of and apparatus for treating a tow of filaments or threads in a limited space. (September 26, 1951.) Passing tows in non-tensioned condition through a current of treating liquid in tubular structures.

47696. Potasse Et Engrais Chimiques, Societe Anonyme. Improvements in the manufacture of phosphated fertilisers. After attacking a natural phosphate with a mineral acid aluminium ions are added to the reaction mass in the proportion of 20 gm. atoms of Al: 100 gm. moles of P_2O_5 , before the addition of a neutralising agent.

47697. Standard Telephones and Cables Limited. A method of making joints between cable lengths of multi-conductor carrier frequency cable. Pairs of cable are connected together in order to form electrical circuits so that the phase angles are nearly equal.

47698. Mohd. Khalil. A fastening device for securing the rail to a railway track. (August 13, 1951.) Bar with cam shaped one end and other end bent to T-bar-shaped clip and fixed to sleeper perpendicularly with cam end abutting rail and clip end made to override inclined part of rail foot.

47699. Alagiah Emile Ponnuthamby. Improvements in or relating to refuse or dust bins. Provided with a hinged lid at the top, a vertical with discharge mouth and a sliding shutter for said mouth, and a sloping bed extending from the wall opposite to the discharge mouth and terminating at the lower end of said mouth.

47700. (Mrs.) Kusum Lele. Improvements in or relating to electric switches.

Contact members pivotally mounted on dolly on a pivoting pin which passes through the lugs of the dolly and a bracket.

JULY 18.

47701. Void.

47702. Graetz Kommandit-Gesellschaft. Improvements relating to filling cans for lamps and stoves burning liquid fuel under pressure. The filling can is made of a wholly or partially transparent material.

47703. N. V. Tot Aanneming Van Werken Voorheen H. J. Nederhorst. Improvements in and relating to apparatus for determining the load-carrying capacity of sub-strata of different depth. Pressure measuring device is arranged in the tube near the lower end.

JULY 19.

47704. W. D. Tenbroeck. A device for protecting cheques and the like. Comprises a multi-spiked roller mounted in a handle, the roller being provided with a multiplicity of rows of spikes.

47705. W. D. Tenbroeck. A combination staple remover and letter opener. Comprising a metal blade with rounded wedge end and with two ascending flanges on either side of the blade.

47706. Bell Punch Company Limited. Improvements in or relating to ticket issuing machines. (July 23, 1951.) The length of paper is severed from a web, the data is printed on it and the leading end is directed towards a stacker.

47707. Bell Punch Company Limited. Improvements in or relating to ticket issuing machines. (July 23, 1951.) A length of paper is severed from the web, the data is printed on it and the length is fed to a stacker.

47708. Vickers-Armstrongs Limited. Improvements in or relating to bar grinding mills. (November 13, 1951.) Wherein the pivotal movement of the bar is in a plane radial of the roll, which plane passes through the grinding surface nearer to the trailing edge than the leading edge thereof.

47709. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of a thioamide. Reacting isonicotinonitrile with hydrogen sulfide in the presence of alcoholic ammonia.

47710. Dunlop Rubber Company Limited. Apparatus for electrically butt-welding

wire ends. (July 20, 1951.) Comprises pairs of opposed conductor jaws adapted to hold the ends of wire in abutting relationship located side by side.

47711. Dunlop Rubber Company Limited. Apparatus for the automatic forming of a shaped loop of wire from wire stock. (July 20, 1951.) Comprises a loop former, means for rotating the loop former, releasable clamping means, cutting means for the shaped loop and means to operate cutting means and clamping means.

47712. Dunlop Rubber Company Limited. Apparatus for the removal of flash from a welded wire joint. (July 20, 1951.) Comprising at least two trimming wheels each having circumferentially extending recesses formed on their peripheries to accommodate the thickness of the wire of a loop.

47713. Dunlop Rubber Company Limited. Apparatus for the automatic production of endless loops of wire from wire stock. (July 20, 1951.) Comprises a loop former rotatable about its axis, releasable clamping means, means for rotating the loop former, means for cutting it, an electric welding unit having clamping conductor-jaws, transfer means for removing the shaped loop for the loop former.

47714. Westinghouse Garrard Ticket Machines Limited. Improvements relating to ticket issuing machines. (July 20, 1951.) Provided with a moving blade having an aperture therein, one side of the aperture having a cutting edge for cooperation with another blade to sever the ticket strip.

JULY 21.

47715. Khushhal Chand Gulati and Basanta Gopal Chatterjee. Improvements in or relating to preparation of terpenyl esters. Terpenes obtained from turpentine oil are reacted with an organic acid with or without a condensation catalyst.

47716. Void.

47717. Void.

47718. Parke, Davis & Company. Process for the production of dichloroacet-amido propane diol compounds. Reacting dichloroacetonitrile with 1-phenyl-2-amino-propane-1, 3-diol and a temperature below 100°C.

47719. Parke, Davis & Company. Process for the production Δ^2 -oxazolines.

Reacting dichloroacetonitrile with 1-phenyl-2-amino-propane-1, 3-diol under anhydrous condition.

47720. The Firestone Tire & Rubber Company. Improvements in or relating to tires. Consisting of a inner layer formed of a heat plasticizer prevulcanized co-polymer of an isoolefin and a diolefin.

47721. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De Saint-Gobain, Chauny and Cirey. An improved process for the manufacture of phospho-nitrogenous fertilizers. Latent heat of vapourisation of ammonia for ammoniation of acid reaction product of phosphate is used for cooling the acid reaction medium for the phosphate.

47722. Void.

47723. Mahindra and Mahindra Ltd. Improvements relating to trailers. Comprises a disc with downwardly projecting flanges and a lower part comprising a disc engaged by the flanges of the upper part.

JULY 22.

47724. E. Munekata, Y. Nakano and S. Honda. A method of preparing ammonium nitrate and/or ammonium nitrate fertilizer containing phosphate and/or potassium salt. Oxygen and air are mixed with ammonia to form oxides of nitrogen which are converted to nitric acid and the acid with ammonia forms ammonium nitrate.

47725. Perfogit Societe per Azioni. Process and apparatus for the melting of melt-spinnable substances, especially polymers. Wherein required heat is imparted to solid substance by contacting with same substance in liquid state.

47726. Perfogit Societe per Azioni. Process and apparatus for the melting of substances spinnable by melting. Wherein a part is contacted with heated surface and another part with liquid of same substance.

47727. Universal Oil Products Company. Process for the separation of mixtures of organic compounds. By counter-currently contacting with a selective solvent and introducing in the extraction zone a compound which is more volatile than that component of the mixture for which the solvent has a smaller solubility.

47728. A. J. P. J. Thomas. Process of propagating pathogenic viruses in the production of virus vaccines for animals. Fragmenting an animal tissue in which a selected virus is known to propagate, diluting it to form suspension, introducing the suspension into an animal, introducing a selected virus into said animal after a few days and removing virulent mass of the tissue.

47729. Void.

47730. Comptoir Industriel D'Etirage Et Profilage De Metaux. Improvements in or relating to hot extrusion of metals. A disc of less valuable metal placed at the rear of the billet and extruding the billet.

47731. The British Thomson-Houston Company Limited. Improvements in and relating to voltage regulators. (August 22, 1951.) A negative phase sequence circuit is applied in the transformer secondary circuit to operate a relay if one of the voltage transformer fuses fails.

JULY 23.

47732. Westinghouse Garrard Ticket machines Limited. Improvements in and relating to ticket printing and issuing machines. (August 8, 1951.) A feed member feeds and draws the strip through the machine.

47733. M. Ehny. Pendulums for radies-thesia. Comprising a diamagnetic support and a body formed by a casing of neutral material filled with dynamized organic substance and supported by a cord.

47734. N. V. Phillips' Gloeilampen-fabrieken. Improvements in or relating to the manufacture of dispenser cathodes the wall of which is made of porous refractory metal. After pre-sintering at low temperature, the porous body is slipped over a part of cathode structure and the cathode is heated at a temperature higher than pre-sintering temperature.

47735. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De Saint-Gobain' Chauny and Cirey. Improvements in or relating to the manufacture of phospho-nitrogenous fertilizers. Ammonia and air is simultaneously introduced in a solution of natural phosphate with nitric acid.

47736. S. & R. J. Everett & Company Limited. Improvements relating to

hypodermic syringes. (July 24, 1951.) Wherein index mark and scale marked either on barrel or plunger register when plunger is fully pushed in so as to remain at a distance from both ends.

47737. The Lang Pen Company Limited. Improvements in pocket clips for fountain pens, pencils and the like. (July 24, 1951.) An eye-bolt is secured to clip arm by inter-engagement of complementary surfaces of the two members which inter-engagement is maintained by lateral constraint in a slot at the end of the pen.

47738. Standard Telephones and Cables Limited. Improvements in or relating to electromagnetic light-current contact-making relays. (September 24, 1951.) Core consists of a plurality of parts in close contact with one another.

47739. Creed and Company Limited. Two-way facsimile telegraph systems. Rotary drum provided at the transmitting and receiving ends and apparatus at the transmitter end to automatically stop the transmitter scanning mechanism in response to stopping of the drum.

47740. Ciba Limited. Process for the manufacture of new esters of cyclo-alkylidene acetic acids. Aryl cyclo-alkylidene acetic acids or their derivatives are converted into their N-disubstituted aminoalkyl esters by a known method, or arylcycloalkyl-acetic-acid-aminoalkyl ester containing a removable residue is treated to split it off giving cycloalkylidene esters.

47741. B. Zunckel. An improved method of and apparatus for manufacturing cast mass-produced parts. Metal cast in continuous moulds cooled on one side by cooling plates.

JULY 24.

47742. Void.

47743. Metallgesellschaft Aktiengesellschaft. Method of and apparatus for the separation of mixtures of substances containing magnetic and electrically conducting constituents. Wherein the discharge means of the magnetic separator for discharging the residues therefrom are rendered electrically conducting.

47744. The British United Shoe Machinery Company Ltd. Improvements in or relating to shoe upper conforming

- machines. Comprising wiping means including for each side of the shoe, a pair of wipers.
47745. Imperial Chemical Industries Limited. Improvements in or relating to pest control smoke generators and pest control smoke generating compositions. (September 14, 1951.) Comprising one or more vapourisable pest control compounds and ammonium dichromate together with potassium persulphate.
47746. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to devices or supply systems comprising two gas- and/or vapour-filled discharge tubes of which one is operated in series with a capacitative impedance, and the other tube is operated in series with an inductive impedance.
47747. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to devices or supply systems of the kind comprising two gas- and/or vapour-discharge tubes. Operated by currents shifted in phase relative to another, the tubes are of the kind which ignites at the supply voltage without the use of a switch short-circuiting the tube and one tube is connected in series with two inductors.
47748. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a method of producing germanium in the form of wire. A glass or quartz tube filled with germanium and heated to a temperature higher than the melting point of germanium and subsequently is drawn out to give a wire.
47749. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of purifying germanium. Germanium heated *in vacuo* at a temperature comprised between 1200° and 1500°.
47750. N. V. Philips' Gloeilampenfabrieken. Improved method for breaking-up an annular core of ferromagnetic material. Core is caused by local thermal action to split along at least one predetermined line.
47751. Void.
47752. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De Saint-Gobain' Chauny and Cirey. Process and apparatus for the granulation of fertilisers and the like. A part of the granulated product is added to the sludge at different stages.
47753. British Telecommunications Research Limited. Improvements in or (July 25, 1951.) Recording is effected (July 25, 1951.) Recording is effected in a binary code in accordance with the markings provided from key contacts.
47754. British Telecommunications Research Limited. Improvements in or relating to electrical signalling systems. (July 25, 1951.) For transmission of impulses according to digits registered on magnetic drum, control arrangements responsive to an initiating signal cooperating with a pulse generator to cause the value of a registered digit to be reduced by one unit after each such pulse and an impulse to be transmitted over an outgoing circuit.
47755. British Telecommunications Research Limited. Improvements in or relating to electrical signalling systems. (July 25, 1951.) Continuously operating testing arrangements effect periodical tests of signalling line and in response to each impulse followed by a pause control arrangements cause addition of one unit to the registration, a timing device being set after each impulse and if it continues in operation without arrival of further impulses, causing additional impulses subsequently received to be registered in different storage space.
47756. British Telecommunications Research Limited. Improvements in or relating to electrical translating arrangements suitable for use in automatic telephone systems. (July 25, 1951.) Employs a high speed register-device common to a plurality of signal sources and involving the scanning of a succession of storage areas.
47757. Belliss & Morcom Limited. Valves for air or other gas pumps. (February 28, 1952.) Central parts of valve and cushion plates secured together by annular clamping means.
47758. Void.
47759. L. B. Thwaites. A machine for chopping up cut fodder lying on the ground, and for delivering it to a trailer. (December 29, 1951.) Having a means for picking up the fodder and delivering it to a rotary chopping device, wherein the latter throws the chopped fodder into an attached trailer.

JULY 25.

47760. Ciba Limited. Manufacture of metalliferous azodyestuffs. A monoazodyestuff is treated with an agent yielding cobalt or chromium.

47761. Void.

JULY 26.

47762. Void.

47763. Harbens Limited. Improvements relating to building motions for building yarn packages in textile machines. Using a vane type hydraulic motor to impart oscillatory movements to a shaft to which its rotor is coupled, the shaft imparting oscillatory movements to the part responsible for building the yarn package.

47764. Casablancas High Draft Company Limited. Improvements in or relating to drafting apparatus for textile fibres. (August 9, 1951.) Providing a tensor arm having one of its ends pointed to facilitate entry of the arm into its operative position in the cradle while the opposite end being in the form of a handle.

JULY 28.

47765. Void.

47766. Council of Scientific and Industrial Research. Cation exchangers. Adding to bhilwan nut shell liquid a resinifying agent heating it and treating it with a sulphonating agent.

47767. N. V. De Bataafsche Petroleum Maatschappij. Process for the improvement of heat transmission in plants with a fluid bed of finely divided, solid particles as heat transmission medium. Wherein at a number of points in the plant where the particles are not set in motion by the stream of gas, gaseous medium is introduced such that the bed there attains a fluid state.

47768. N. V. De Bataafsche Petroleum Maatschappij. Process for the transmission of heat by use of a finely divided solid substance as heat transmission medium. Wherein the heat transmission medium is conducted upwards by a gaseous medium at a rate at least 5m/sec., whereupon it flows as a dense bed through a second chamber and then leads to the first chamber.

47769. "Shell" Refining and Marketing Company Limited. Improvements in and relating to fuel oils and the combustion of fuel oils. (July 30, 1951.) Fuel oil comprising a high ash residual fuel oil and an oil-soluble organic compound of phosphorus.

47770. L. B. Visenjou. Improvements in the shelling of nuts. (July 28, 1951.) Void after publication. Constraining the nuts to rapid movement along a prescribed path and causing the nuts to impinge against a solid target.

47771. Saurefabric Schweizerhall. Process for the production of titanium tetrachloride. Chlorinating pulverulent titanium oxide containing raw material by suspending it in a gas stream containing carbon monoxide and chlorine.

47772. Imperial Paper and Color Corporation. Pigment coloring compositions containing a reaction product of melamine, formaldehyde, glycerine and an alkylolamine. Comprising a dispersed pigment, water and a cationic resin prepared by reacting together melamine, formaldehyde, glycerine and an alkylol amine.

47773. Technicolor Motion Picture Corporation. Registering device for cinematographic film and other elongate strips and method of making same. Comprising a non-stretchable flexible ribbon having at corresponding intervals openings and register pins with heads to fit film perforations and shanks fitted in the openings at the junction between the head and the shanks, and shoulders perpendicular to the axes of the pins and seated on the front of the ribbon and the ends of the shanks anchored in the openings.

47774. International General Electric Company of New York Limited. Improvements in or relating to manufacture of lamps. Lamp mount is sealed into the bulb after which the bulb is heated to a pliable condition and reshaped.

47775. Void.

47776. J. H. Devine. Improvements in bolts. Bolt has a head portion, shank portion, shoulder and toe, a part of circumference of the shank extending at right angle to the shoulder and the toe extending radically from said part.

47777. Ciba Limited. Process for the manufacture of new polycyclic ketones. Reacting $\Delta^1:2$ -2-oxo-1-methyl-octahydronaphthalenes having one hydrogen atom in 8 position with vinyl-methyl ketone and closing the ring.

JULY 29.

47778. Standard Oil Development Company. Method of making alumina containing catalysts. Hydrolyzing aluminium alcoholate by means of water

or hydrosol or an impregnating solution containing a catalytic component.

47779. Kay & Company (Engineers) Limited. Improvements in pipe couplings. With a sealing ring or thimble of rigid wedge shape constructed to bite into the pipe wall with pipe piercing ridges formed at the thin end.

47780. Halmets, Limited. Headbands for helmets. (July 30, 1951.) Having a head band provided with sinuous supporting strips secured to the adjacent surfaces of the helmet.

47781. C. I. McCulloch and E. N. Towndrow. Improvements in or relating to tiles. Consisting of a sheet metal having embossed on its surface channels, grooves or depressions.

47782. A. P. Fitzjohn, and George Turton Platts & Co. Limited. Improvements in and relating to buffing and draw-gear. [Divided out of No. 44027; antedated to November 3, 1950.] Hydraulic cylinder and piston assembly mounted in yoke connected to vehicle under carriage frame; sliding movement imparted to cylinder or piston by yoke under pull or buffing action to effect displacement of hydraulic fluid from cylinder into piston.

47783. The Wellcome Foundation Limited. Improvements in or relating to the manufacture of 3-pyrrolidino-1-(2"-pyridyl)-1-phenyl-prop-1-enes. (August 13, 1951.) By dehydration of the corresponding carbinol with sulphuric acid.

JULY 30.

47784. The General Electric Company Limited. Improvements in or relating to luminescent materials. (July 31, 1951.) Consists of a silicate matrix composed of the oxides of lithium, silicon, barium and/or strontium, activated by cerium and optionally by manganese.

47785. Ciba Limited. Process for the manufacture of azo-dyestuffs containing cobalt. An agent providing cobalt is caused to react upon a monoazo dyestuff which is free from sulphonie acid groups and carboxyl groups.

JULY 31.

47786. "Shell" Refining and Marketing Company Limited. Apparatus for burning liquid fuel. (August 2, 1951.) Each burner comprises a tip valve adapted to

close the final outlet orifice and connected with an operating piston or diaphragm.

47787. Ford Motor Company of Canada, Limited. Valve gear for internal combustion engines. A spring loaded valve is operated by an eccentric pivotally mounted in the rocker arm.

47788. Combustion Engineering-Superheater, Inc. Improvements in or relating to a steam or vapour separator. Spinner means imparts unflowing mixture a whirling motion and an unobstructed annular passage is provided between the upper end of the primary tube and the steam collector sleeve.

47789. J. E. Kennedy. Furnace structures. Comprising a steel framework, refractory wall supported by steel frame, a bracket, a tie bar, a row of tubes connected to the bar, a link pivotally connected at the ends to the bracket and tie-bar to flexibly space the tubes.

47790. J. B. Ratelband. Improvements in and relating to checkvalves. A housing and a streamlined body located in said housing, the streamlined body being surrounded by a flexible diaphragm.

47791. J. B. Batelband. Improvements in and relating to valves. The diaphragm of the valve being provided at its outer end with two radial collars.

AUGUST 1.

47792. Void.

47793. Ruhrchemie Aktiengesellschaft. Process and apparatus for drying materials capable of being poured. The moist material in a continuously replenished conical pouring or heap is exposed to a hot gas stream at high velocity such that the dried portions of the material are continuously removed by the gas stream.

47794. Ruhrchemie Aktiengesellschaft. Process and apparatus for the de-dusting and classification of granular materials. A distributed stream of granular material is contacted with a stream of gas, counter current to the granular material.

47795. Auto Transmissions Limited, and E. J. De Normanville. Epicyclic power transmission mechanisms. (August 2, 1951.) Inter engaging planet pinions on planet pinion carrier respectively engages driving and reaction sun

pinions, a brake controllable internal toothed annulus engages the reaction sun pinion.

47796. P. P. Alden. A device for the indication of the fertility period of women. Device comprising two mutually movable members having number rows, a third movable member having marking on it being adjustable relative to first two members and a mask with an indicator mark.

47797. Lamson Paragon Supply Company Limited. Improvements in and relating to feeding means for webs of continuous stationery. (August 3, 1951.) Comprising means adapted to exert a simultaneous feeding movement on the portions of the webs on the infeed and outfeed sides of the platen.

47798. A.S.C. Hart. Improvements in or relating to mechanism for driving the sley of a loom. (September 17, 1951.) Comprising means for imparting reciprocating motion to one part of the sley and second means for imparting reciprocating motion of twice the frequency of the first motion to another part of sley.

47799. F. Mayer. A device for the delivery of fuel into internal combustion engines, particularly automobile engines. Partial vacuum created within a casing closed at all sides and holding liquid so that a free space is left between the surface of the liquid and the upper wall of the casing.

AUGUST 2.

47800. Void.

47801. Void.

AUGUST 4.

47802. Council of Scientific and Industrial Research. Purification and refining of non-edible, non-drying and so-called medicinal oils such as Karanja, Polang and Nageswar. Comprises cold extraction of the oil at room temperature with organic solvent like methyl alcohol, ethyl alcohol or acetone and subjecting the extracted oil to deodorisation and steam distillation.

47803. A. K. Ghosh. Improvements in and relating to ironclad or main switches. Equipped with one or more auxiliary safety fuse which can be connected in parallel to the principal fuse.

47804. Void.

47805. Standard Telephones and Cables Limited. Electromagnetic horn. Comprises two conductors spaced parallelly by a dielectric, the dielectric having a variable characteristic.

47806. Ciba Limited. Process for the preparation of a pure sedative-hypnotic and hypotensive substance. Extracting the plant of the Rauwolfia species by means of a weakly polar or non-polar solvent which is only partly miscible with water and isolating reserpine from the extract.

47807. Cognate with Appln. No. 47806.

AUGUST 5.

47808. Dr. Jogindra Nath Bagchi. An immersion liquid for microscopy. Consists of a natural resinous material, a solvent for the resinous material, esters and a buffer/inhibitor material such as metallic soap of calcium and/or magnesium.

47809. M. A. F. Societe Civil D'Etudes Pour Materiel De Fonderie. Improvements in or relating to fluid operated servo-motor remote control mechanism. Distributors for control of fluid actuated by adjustable abutments on members secured on continuously driven shaft.

47810. M. A. F. Societe Civile D'Etudes Pour Materiel De Fonderie. Automatic machine for the casting and stripping of pistons of thermal engines. Lateral core pieces disengaged one by one through passage left by central core member; operation of assembling and stripping mould effected automatically in correct sequence by servo-motors under control of distributing device.

47811. J. Neal. An improved power-operated saw for use in conjunction with farm tractors. (October 12, 1951.) Frame having arm extending on each side of tractor to carry a saw and handle for manipulation.

47812. N. V. De Bataafsche Petroleum Maatschappij. Process for preparing hard resinous products, and compositions from which hard resinous products may be obtained. Preparing hard resinous products from ethoxyline condensates using sulfonic acid or the sulfonyl halides as hardening agents.

47813. Cognate with the Appln. No. 47614.

47814. A. J. Lund and Cooper Engineering Ltd. Improvements in or relating to footstep bearings for sugar cane

crushers, decorticators, flour mills and the like machinery. Bearing for rotating vertical shaft which bearing would give a pivotal support to said shaft.

AUGUST 6.

47815. Council of Scientific & Industrial Research. Liquid preparations such as paints or the like coating compositions. Incorporating in a paint or coating composition highly degraded natural rubber or partially polymerised rubber hydrocarbon polymer.

47816. Council of Scientific and Industrial Research. Duplicating inks. Dispensing pigment in oil having hydrocarbon polymer of low molecular weight as protective colloid.

47817. Council of Scientific and Industrial Research. A process for the manufacture of sodium tripolyphosphate. By reacting trisodium phosphate with commercial phosphoric acid and caustic soda.

47818. K. Ando and Takeda Pharmaceutical Industries Limited. A process for the manufacture of bacterial vaccines. Treating the bacterial suspension with water soluble chromium salt.

47819. Christiania Spigerverk. Apparatus for stepwise turning round prismatic articles. Characterized by the combination of one pair of turning wheels provided with radial cams driving mechanism by means of which the turning wheels can be successively rotated in one and the same direction.

47820. Imperial Chemical Industries Limited. Stabilised sodium aluminate. (August 17, 1951.) Comprising a mixture of sodium aluminate containing 1.2 to 1.4 moles of Na_2O per mole of Al_2O_3 and 0.01 per cent. to 0.1 per cent. of iron oxide as impurity, and mannitol or sorbitol.

47821. Didier-Kogag-Hinselmann, Koksofenbau Und Gasverwertung A.G. Improvements relating to regenerators for coke ovens. Regenerator having a bottom flue which is divided into a series of separate channels including means for regulating flow of gas to and from regenerator cell.

47822. The Metal Box Company Limited. Improvements in or relating to closures for containers. A closure comprising a crown apertured, a skirt depending from the crown and a plasticised and cured resin seal adhering to the sides and crown.

47823. Void.

47824. Hydrocarbon Research, Inc. Improvements in and relating to a hydrocarbon conversion process. Hydrocarbon stream is subjected at high temperature into a portion of solid catalyst while a regenerating gas of oxygen and steam is injected into another portion of said catalyst to remove carbonaceous matter deposited on the catalyst by the hydrocarbon during conversion.

AUGUST 7.

47825. K. S. Mahulay and M. C. Mahulay. Improvements in or relating to seed drills. Having means comprising feed cups provided at the bottom of seed box for leading the seeds to the tines.

47826. Ciba Limited. Process for the manufacture of cobaltiferous azo-dye-stuffs. A monoazo-dyestuff is treated with an agent yielding cobalt.

47827. Dr. C. Otto & Comp. G.m.b.H. Improvements in or relating to regenerative heat exchanging apparatus such as cowpers. (September 8, 1951.) A plurality of parallel combustion chambers of high and narrow rectangular cross-section is arranged in the lower structure, each combustion chamber containing a series of burners adapted to regulate the feeding of the combustion media.

47828. J. Lyons and Company Limited. Improvements in and relating to the manufacture of tea. (August 8, 1951.) Wherein surface dried leaf is frozen and then thawed so as not to allow moisture to condense thereon.

47829. J. Lyons and Company Limited. Improvements in and relating to the manufacture of tea. (August 8, 1951.) Subjecting to freezing after it has been subjected to some at least of the usual steps of manufacture.

47830. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to the manufacture and supply of gases. (August 27, 1951.) By feeding the excess gas available to a storage medium comprising a mass of the liquified gas and evaporating gas from the storage medium when the demand exceeds the gas output.

47831. J. S. Kamborian. Progressive-type lasting machine. The wiper roll being made coaxial with one of the gripper rolls.

47832. The Firestone Tire & Rubber Company. Improvements in or relating to apparatus for handling sheet material. Line secured at its ends to a pair of reels is adapted to receive sheet material to store it within its convolutions wound on one reel and to deliver sheet material as the liner is unwound.

47833. Combustion Engineering-Superheater, Inc. Improvements in or relating to a mold assembling installation. [Patent of Addition to No. 47402.] Comprising the assembly of foundry molds by mechanised means and control interlocks which facilitate progress of mold components.

AUGUST 8.

47834. Void.

47835. Maatschappij Voor Kolenbewerking Stamicarbon N. V. Process for producing simultaneously both carbides and valuable gas. Oxygen with steam and/or carbondioxide blown in a blast furnace containing a mixture of carbonaceous solid fuels and oxides, hydroxides or carbonates of metals.

47836. Void.

47837. Void.

AUGUST 9.

47838. Void.

47839. Void.

AUGUST 11.

47840. Indian Central Cotton Committee and R. L. N. Iyengar. A balance for determining the ginning percentage. Comprising a balance of the steel-yard type wherein one pan is fixed to the shorter arm to carry seeds while the other longer arm carries a movable light pan carrying lint calibrations being marked on the longer arm.

47841. Satish Chandra De. Improved process for the manufacture of rubber plied beltings of multiple layers. Weaving cotton fabric for belting into two or more inseparable, jointless concentric tube like form forcing latex through the spaces and squeezing excess rubber.

47842. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of heterocyclic compounds. By reacting a pyridine-4-carboxylic acid

compound with a non-isocyclic, ring substituted hydrazine derivative or a salt thereof.

47843. The Micanite and Insulators Company Limited. A method of making mica products such as expanded mica, mica flakes, mica paper and mica mouldings. (August 15, 1951.) Heating mica to a temperature and for a time lying within the range between 760°C for half an hour and 625°C for twenty four hours and disintegrating the mica by mechanical agitation.

47844. Societe Anonyme Pour Les Applications De L'Electricite Et Des Gaz Rares—Etablissements Claude-Paz & Silva. Device for starting and feeding two electric discharge apparatus. Comprising a transformer having one primary and two secondary windings, connections for the starting of each apparatus by pre-heating its electrodes connection for the first apparatus including a set inductance coil magnetically coupled with the transformer.

47845. Monsanto Chemical Company. Improvements in or relating to method and apparatus for applying liquids to unspun textile fibers. Directing gas stream containing fibres through a passageway provided with plurality of inclined surface and subjecting fibers in said stream to a spray of fine droplets of liquid.

47846. Maatschappij Voor Kolenbewerking Stamicarbon N. V. Process or degasifying solid fuels in a fluidized fuel bed. The process is characterised in that the material to be degasified is injected into the fuel bed by means of a carrier gas containing free oxygen.

AUGUST 13.

47847. Void.

47848. Void.

47849. American Cyanamid Company. Improvements relating to thiadiazole sulfonamides and the preparation thereof. (June 11, 1952.) [Addition to No. 44829.] Treating thiadiazole disulfide with chlorine in aqueous acid solution and subsequently reacting sulfonyl chloride thus obtained with ammonia.

47850. American Cyanamid Company. Improvements relating to thiadiazole sulfonamides and the preparation thereof. (June 11, 1952.) [Addition to No. 44829.] Treating thiadiazole mercaptan

with bromine in aqueous acid solution and subsequently reacting sulphonyl bromide thus obtained with ammonia.

47851. Metalrax, Limited. Improvements in slotted angle bars for constructional work. Comprising one flange of angle section bar which is provided with a row of slots disposed transversely to the edges of the flange.
47852. British Resin Products Limited. Process for the production of resinous ester compositions and the esters so produced. Reacting a higher alkenyl-phenol-aldehyde condensation product with an esterifying agent.
47853. British Resin Products Limited. Process for the production of resinous ester compositions and the ethers so produced. Etherifying a higher alkenyl-phenol-aldehyde condensation product with a hydrocarbon etherifying agent.
47854. T.M.M. (Research) Limited. Improvements in apparatus for detecting and correcting irregularities of thickness of a textile sliver. (August 14, 1951.) Employing a relay in which the projection of the relay rods beyond a datum setting is measured by a transmitter element.
47855. Farbwerke Hoechst vormals Meister Lucius & Bruning. Surgical ampule-syringe. A hollow space is provided in the neck of the ampule and a piston stopper has a cavity which faces the plunger head, the cavity being deeper than the length of the plunger head.
47856. Farbwerke Hoechst vormals Meister Lucius & Bruning. Manufacture of nonachloro- and decachloro-endomethylene-tetra-hydrindenes and pesticidal preparations containing them. (September 14, 1951.) Chlorinating the Diels-Alder adduct cyclopentadiene-hexachloro-cyclopentadiene.
47857. El-Cu Elettore Cucitrice Industriale Portatile S.p.A. Portable sewing machine, particularly suited for the closing of sacks, wrappings of parcels or the like. Having conventional elements of small size fitted on a pistol grip and comprising mechanisms for thread feed and hooking for chain stitch.
- AUGUST 14.
47858. B. P. Mathias. A machine for making chapatis or puris and the like. The machine consists of two rollers the forming roller and the guiding roller provided in a fixed position and in such a manner as to rotate over each other in opposite directions there being no clearance between the surfaces of the rollers and wherein a recess corresponding to the shape of chapatis is provided in the surface of the forming roller.
47859. Automatic Telephone and Electric Company Limited. Improvements in ringing current and tone generators for use in telephone systems. (October 12, 1950.) [Divided out of No. 45872; anti-dated to September 19, 1951.] Comprises a constant frequency oscillation generator having two output circuits one provided with a continuous member unobtainable tone and also a tone under control of relaxation oscillator while the second output is modulated by a second relaxation oscillator.
47860. R. H. Turnbull. A new or improved process for the separation of the fibres from the bark, wood and other tissues of fibrous plants. (August 16, 1951.) Treating the stems containing fibres with enzyme-containing decomposition effecting plant juices at a temperature of 30°—60°C.
47861. N. V. De Bataafsche Petroleum Maatschappij. Thermal treatment and separation process. Heavy hydrocarbon oil is converted into lighter oil by causing the heavy oil to flow downwardly through a conversion and fractionation zone, through which a hot stream of vaporous gas oil products is circulated counter-currently to, and in direct contact with the heavy oil.
47862. G. K. N. Group Services Limited. A new or improved machine for delivering predetermined numerical quantities of articles, such as screws or other headed rod-like articles. (August 15, 1951.) Comprising means for feeding articles in a row one behind the other through a counting station provided with a detection device responsive to passage of a predetermined number of articles.
47863. H. Feinte. Improvements in signalling on rail-roads. Incorporating an electrically continuous rail connected with one terminal of a source of electric energy while the other signal-controlling rail is constituted by a plurality of electrically disconnected sections, of which each section is connected with one terminal of an L-shaped network.
47864. Electraulic Presses Limited. Improvements in and relating to liquid

pressure actuated automatic bypass valves. Valve member having operative area open for connection to and subjected to the delivery pressure from one or more pumps and a control or pilot valve which is also similarly adapted.

47865. Electraulic Presses Limited. Improvements in and relating to control means for hydraulic presses. Control means comprises fluid operated piston control valve delivery of pressure liquid to the press cylinder and a manually operated valve adapted to control movement of the piston of the main control valve.

47866. Electraulic Presses Limited. Improvements in and relating to adjustable relief valves. Spring loaded by hydraulic pressure to increase or decrease the load applied to the relief valve.

47867. Electraulic Presses Limited. Improvements in and relating to hydraulic control valves. Liquid locked behind control valve spindle by means operated by sudden and predetermined rise in pressure.

47868. The Armco International Corporation. Locking structure for nestable culvert pipe. Composed of semi-circular sections each section having a series of spaced parallel pairs of cut along one longitudinal section and a series of U shaped cuts along other longitudinal edge.

47869. S. D. Gabris & Co. Improved boxes, chests, cases and the like. Wherein the detachable connection between two panels is effected by one or more projecting tongues adapted to engage a complementary socket.

47870. T. M. M. (Research) Limited. Improvements relating to the blending of textile fibrous materials. (August 16, 1951.) Combing and detaching the forward ends of different kinds of fibres supplied at a measured rate and feeding forwardly the resulting mass of superposed tenuous layers of detached tufts.

47871. Reynolds Metals Company. Improvements in or relating to manufacture of pipes. Forming a continuous tubular liner of sheet metal, wrapping the liner with one reinforcing layer, forming and wrapping at stations moving continuously along the length of the liner.

47872. Molins Machine Company Limited. Improvements in or relating to machines for manipulating cut tobacco. (August

15, 1951.) Subjecting the length of tobacco mass to rays from a radio active source, the ionisation power of which are absorbed by the tobacco in known proportion to its mass, and determining changes in the absorption with variations in the tobacco mass by an ionisation chamber and applying the current due to the ionisation to regulate the rate at which tobacco is being fed.

47873. Molins Machine Company Limited. Improvements in or relating to machines for manipulating cut tobacco. (August 15, 1951.) Comprising conveyor means, means for showering cut tobacco on to conveyor means, means for measuring the amount of tobacco and means responsive to the measuring device and operative to alter the speed of a part of said conveyor means according to the variation of the quantity of tobacco in the measuring device

AUGUST 16.

47874. A. M. Moen. Mixing faucets. Comprises a valve housing with a cylindrical chamber having hot and cold water inlet ports, a sleeve valve movably fitted across said ports, a stem extending from the sleeve valve and a closure member on the stem for closing and opening the chamber.

47875. Lewis Berger & Sons Limited. Improvements in or relating to the manufacture of interpolymers of styrene with polyhydric alcohol esters of unsaturated fatty acids. (August 17, 1951.) Heating styrene or nuclear alkyl or halogen substituted styrene with polyhydric alcohol esters of one or more fatty acids.

47876. D. Buchanan. Process and apparatus for breaking tea during manufacture. Forming the tea into a layer of predetermined depth and subjecting it to squeezing pressure to compress and reduce the layer in depth.

47877. Waugh Equipment Company. Improvements in grate bars for use in locomotive fire boxes and boiler furnaces. Air passage between adjacent lugs are divergent throughout their entire length from tops of projections downwards.

AUGUST 18.

47878. Void.

47879. Void.

47880. Societe Des Usines Chimiques Rhone Poulenc. Improvements in or

- relating to gentisic acid derivatives. (July 21, 1952.) Reacting gentisic acid with 2-hydroxy-4-nitrobenzoyl chloride or a 2-acylated derivative thereof and reducing the product.
47881. McConnel Bomford Limited. Improvements in or relating to rotors for threshing machines. (August 21, 1951.) Wherein each rod in one set of beater arms diverges from a nearby rod in an adjacent set so as to provide a space which increases in width as it extends away from the axis of rotation.
47882. Interlake Iron Corporation. Apparatus for charging a blast furnace. (November 12, 1951.) Electric motor connected to hopper for rotating it continuously the hopper being rotated at least one complete revolution during dumping.
47883. F. Hoffmann-La Roche & Co. Aktiengesellschaft. 4-(β -amino- γ -bromopropyl)-imidazole acid addition salts and a process for the manufacture thereof. Reacting hydrogen bromide with β -amino- γ -imidazolyl-(4)-propanol or a salt thereof.
47884. A. J. Menzies, N. Hendry and J. Green. Treatment of fermented liquors of distillates. The potable qualities of the liquors are improved by treatment with a synthetic polymeric cation exchange material containing free acid groups.
47885. Albion Motors Limited. Improvements in or relating to oil cleaners. [Addition to No. 47135.] A drum mounted for rotation on a vertical-shaft, having axial passage and ports, within a casing, downcomer pipe with upper end at two third height of drum and open to nozzle tangentially set and projecting from drum.
47886. The Permutit Company Limited. Improvements relating to boiler feed water plants. (September 12, 1951.) Comprising a tank containing anion exchange material capable of removing CO_2 from the make-up water passing through the tank, and a surge tank connected to the pipe leading to the boiler from said tank.
47887. Standard Telephones and Cables Limited. Improvements in or relating to radio navigation. (October 29, 1951.) In which the directional indication is obtained by comparison between a reference signal and a signal derived from "antenna modulation" of the received energy.
47888. Standard Telephones and Cables Limited. Improvements in the method of applying a protective and electrically insulating covering to components. (December 13, 1951.) Including the steps of dipping the component into a dispersion of powdered paper in a volatile medium and evaporating the volatile medium to leave an even coating of paper on the component.
47889. Calcutta Plastic Works. A container for ball of wool or the like. The container comprises a body with an open mouth, closed by a removable cover fitted at the open mouth, the cover being adapted to form a rest for the container. At its closed end the container body is provided with holes, one serving as an exit for the thread and other allowing a sling to pass therethrough.
47890. Kesri Mull Kundan Mull. Improvements in or relating to umbrellas. Fixture for holding spokes of collapsed umbrella comprises a tubular piece engaging the stick and a cap with central opening slidably engaging said tubular piece.

AUGUST 19.

47891. Void.
47892. National Research Development Corporation. Improvements relating to the manufacture of sulphuric esters of polysaccharide. (August 30, 1951.) A sulphate of a polysaccharide is subjected to fractional precipitation for removing large molecules and yielding one or more fractions of smaller molecular size.
47893. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric rectifying installations. Each discharge tube comprising an auxiliary electrode, the auxiliary electrode of one tube being connected to a separate direct voltage source for igniting auxiliary arc while the auxiliary electrode of the other is connected to a voltage positive with respect to the cathode of the first tube.
47894. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electrode systems using semi-conductors. Comprising a holder, to which a semi-conducting and two or more filamentary well-conducting electrodes are secured, said filamentary electrodes being interconnected by an insulating bridge.

AUGUST 20.

47895. J. Martin. Improvements in and relating to ejection seats for aircraft. (September 7, 1951.) A release mechanism, effective after a predetermined time interval actuates slip member to release drogue shackle to free drogue from seat.

47896. National Research Development Corporation. Improvements in or relating to non-return valves and pumps incorporating them. (September 17, 1951.) Elastic ring engaging and lying partially with circumferential groove and normally forming seal with sides and base of groove presenting fluid flow into passages opening into base of groove.

47897. The Bahnson Company. Self-cleaning humidifier. (March 12, 1952.) Means for effecting a relative rotation between a grid ring disposed adjacent the impeller for atomizing water and a cleaning member cooperative with grid ring.

47898. Electraulic Presses Limited. Improvements in and relating to hydraulic multi-ram pumps. Of the type with pump rams and associated cylinder bore holes disposed around a common axis and the contacted end of the rams are free to turn when twisted.

47899. Industrial and Financial Association Inc. An improved machine comprising a movable grating, of the dwightllyod type. Comprising rocking bars removably mounted on cars the bars occupy inclined position with narrow space in working position, and occupy vertical position with large space between them when the cars are turned over.

47900. Dunlop Rubber Company Limited. Improvements in printers' blankets. (October 11, 1951.) Comprising a rubberised fabric incorporating a fabric ply of pre-stretched warp components and having at most a low weft content.

47901. Tecalemit Limited. Improvements relating to grease guns or compressors and like lubricant dispensing devices. (August 30, 1951.) High pressure cylinder during suction stroke is swept as far as non-return valve by high pressure piston, and movement of enlarged head of the cylinder in sleeve of low pressure piston assembly assists drawing in grease into the sleeve.

47902. Council of Scientific and Industrial Research. Improvements in the preparation of groundnut milk, curd and products. By roasting groundnut seeds, removing testa, breaking the kernals, making a paste, adding water and adjusting the pH to 6.6-6.8.

47903. S. L. Iyer. Adjustable electric immersion water heater. The heater comprises an electrode connected to the live main, enclosed in a perforated metallic vessel connected to the neutral of the power-supply system. The electrode is adjustable in relation to the vessel. The water between the electrode and the vessel acts as the resistance. The whole assembly is fitted inside a metallic enclosure connected to the earth.

47904. N. V. De Bataafsche Petroleum Maatschappij. Gasoline fuel compositions. Comprising hydrocarbon oil of gasoline boiling range, organo-lead anti-knock agent and oil soluble organic compound having at least one non-aromatic, bromine-reactive unsaturated bond.

47905. N. V. De Bataafsche Petroleum Maatschappij. Gasoline fuel compositions. Comprises hydrocarbon oil of gasoline boiling range containing organo-lead anti-knock agent and oil soluble unsaturated alicyclic compound.

47906. The General Electric Company Limited. Improvements in or relating to apparatus for manufacturing synthetic jewels. (June 6, 1952.) (Addition to No. 47652.) The support member being rotatable about a vertical axis and having means for accurately locating the support member in a number of rotary positions.

47907. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to low-pressure discharge tubes. Comprising gas filling of 1 to 4 mms. pressure and two activated thermionic electrodes each connected to a separate connecting member which in turn is connected to one each strip-shaped conductor provided on the inner side of discharge vessel and parallel to the axis of the tube, the conductors being separated by a electrically non-conductive space of 2.5 to 5 cms.

47908. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to thermal regenerators method and device

- for making them, and devices employing them. Comprising filling material of wire having a hydraulic diameter smaller than 50 microns and an irregular curly structure, the curls extending at right angles to the main directions of flow of gaseous working medium through the regenerator.
47909. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to circuits for counting pulses. Comprising gaseous discharge paths ignited in succession by pulses, each path comprising a first electrode connected to one terminal, and second electrode by way of a resistor to second terminal of a source of supply and being coupled to the ignition electrode of subsequent path and capacitatively to the second electrode, the source of pulses being connected in series with the source of supply.
47910. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to high-frequency devices for dielectric heating. Comprising a back-coupled grid-controlled electron tube oscillator with a tuned circuit, a coil in series with the load circuit, a load capacitor, adjustable circuit capacitor, the back-coupling voltage being taken from a variable capacitive voltage divider.
47911. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electron-optical image converter tubes and to apparatus incorporating same. Comprising a photo-electric cathode, a collecting screen, thimble-shaped anode with a central hole, and a conductive surface surrounding the electron path between marginal surface of the cathode and anode, insulated from the said cathode but provided with a separate supply conductor.
47912. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to image-intensifying tubes. Comprising a double-layer screen, one layer emitting primarily rays upto 4500°A when excited by X-rays, these rays producing photo-emission in the other layer, the surfaces from which light passing through the screen is reflected to the photo-cathode, being formed by a metal that reflects them to a small extent or nil, and which had no affinity or remote affinity with cesium.
47913. Void.
47914. Void.
47915. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to cathode-ray tubes comprising two or more electrode systems. Comprising two or more electrode systems each provided in a separate cylindrical tube, the tubes being arranged parallel and connected to the bottom of the cylindrical wall of the tube.
47916. Ciba Limited. Process for the manufacture of unsaturated ketones of the steroid series. Treating $\Delta^{7:8-9:11}$ -oxido-steroid with an electrophilic agent in presence of an ether and if desired reacting the resulting compound with an acid.
47917. A. Lewis. Improvements in and relating to folding chairs. (October 30, 1951.) Void after publication. Two rigid pivoted rectangular frames and yoke shaped strut having ends pivoted to one frame and a transverse rail riding in guide slots in other frame, the slots extending short distance beyond the pivots between the frames.
47918. The British Thomson-Houston Company Limited. Improvements in and relating to electric motor control systems. (September 4, 1951.) Comprises a reel generator, a dynamo electric exciter, an amplifying exciter and a control means.

AUGUST 21.

47919. Void.

47920. Void.

47921. Void.

47922. Void.

47923. Parke, Davis & Company. Process for the production of N-acylamido diols. By reacting 1-p-nitrophenyl-2-amino-1,3-propanediol with dichloro acetamide or N-acylated dichloroacetamide.

47924. British Insulated Cables Limited. Improvements in the manufacture of a metal tube which may form part of an electric cable. (September 26, 1951.) (Addition to No. 46673.) Wherein solder coating is produced by applying flux to a tape, heating the tape and applying solder metal in elongated form by feeding it endwise towards the hot flux tape while causing the hot tape to travel lengthwise, the rates of feed of the solder metal and of the tape being co-ordinated to maintain contact between

the element and the tape and control the rate of deposition of solder.

47925. Ciba Limited. Cobaltiferous and chromiferous azo-dyestuffs and process of making same. A monoazo dyestuff is treated with an agent yielding chromium or an agent yielding cobalt.

47926. Ciba Limited. Metaliferous azo-dyestuffs and process of making same. Treating a monoazo-dyestuff with an agent yielding cobalt or chromium.

47927. V. Rawls. Apparatus for tyre reconditioning. (April 7, 1952.) Pair of buffing heads with different buffing characteristics mounted on a frame selectively driven and selectively brought on the tyre lugs.

47928. Creed and Company Limited. Improvements in or relating to printing telegraph apparatus. (September 27, 1951.) There are provided separate means responsive to a different distinctive signals to operate upon the transmitter and receiver.

47929. Void.

AUGUST 22.

47930. Dunlop Rubber Company Limited. Apparatus for sleeving joints in wire loops. (August 23, 1951.) Comprising a press having relatively movable die and a reaction member, means for alternately working press to feed channel-shaped sleeve between said die and member to have it swaged.

47931. Standard Oil Development Company. Improvements in or relating to refining petroleum oils. [Divided out of No. 44811; ante-dated to March 20, 1951.] Comprising distilling the crude oil into plurality of fractions, subjecting the latter to a conversion reaction, passing the residual fraction to a fractionating tower and feeding below the point of entry of the latter, each of said fractions or the conversion products thereof.

47932. Metallgesellschaft Aktiengesellschaft. Method of and apparatus for producing activated carbon, catalyst or catalyst carriers. (April 7, 1952.) Conducting granular carbonaceous substance admixed with activating gases through layers of filling bodies.

47933. National Research Council. Improvements in lignin-reinforced rubber.

(August 24, 1951.) By vulcanising a composition comprising co-precipitated rubber and lignin and an agent effective to inhibit the cure-delaying action of the lignin.

47934. J. Vondrous, A. Ferrero and Fornaci Riunite S.P.A. Method and apparatus for moulding ceramic articles and bricks. Interposing between the moulds and a lump of paste to be moulded a thin and resilient sheet.

AUGUST 23.

47935. Siemens-Schuckertwerke Aktiengesellschaft. Synchronous machines, in particular synchronous generators. A synchronous machine synchronised by rectifiers and excited by current drawn from the machine and dependent on load.

47936. Ray-O-Vac Company. Improvements relating to primary electric dry cells. Metallic surface containing tin interposed between zinc electrode and terminal of the alkaline cell.

47937. Brookhirst Switchgear Limited. Improvements in or relating to electric switchgear, motor starters, contactors and the like. (September 14, 1951.) Comprises a starter casing and an isolator switch in addition to the main contactor.

47938. Raghunath Chandra and Indar Singh Pardesi. A device for using mineral fuel oils other than petrol in internal combustion engines for automobiles or the like. Oil converted to gases and vapours by pre-heating in double chambered gas generator heated by exhaust gases and supplied to engine.

47939. E. Gretener. Apparatus for the reproduction of colour, particularly for colour television and for photographic colour reproduction. Employing colour pick-up means for analysing colour into colour components, the characteristics of the pick-up means being so determined and adjusted that a selected colour (other than white) is analysed into colour components of which at least two have ratio equal to unity, whilst white is analysed into ratio of all colour components different from unity.

AUGUST 25.

47940. Master Ali Bax Saval. Medicine for cure of tuberculosis and other diseases. Comprising kalam, bamboo and mango leaves.

47941. Vijnana Parishat. Improvements in or relating to the chemical processing of rock phosphate or other phosphatic materials and products derived therefrom. Comprising dissolving phosphatic constituents in acid and recovering the phosphate as tri- or acid calcium phosphate.
47942. Void.
47943. The Firestone Tire & Rubber Company. Improvements in or relating to tubeless tire diaphragm and a tubeless tire including said diaphragm. A diaphragm comprising a crown portion, side-walls and edge portions, said crown portion normally having its circumferentially extending middle portion depressed radially inwardly.
47944. W. E. Salzmann. Improvements in or relating to devices for use in fixing, driving and lifting side-mounted mowers on tractors. Wherein the transmission shaft is mounted within a rotatably secured protecting tube-carrying the supporting bar for the cutter bar and fixed to the tube are at least two levers.
47945. N. V. Lak-, Vernis- En Verffabriek Molyn & Co. Process for the manufacture of fire-retardant compositions. Comprising a complex ammonium compound which is insoluble in water, an insoluble acid salt and a binding agent.
- AUGUST 26.
47946. Void.
47947. Joseph Lucas (Industries) Limited. Windings for dynamo-electric machines. (August 27, 1951.) A bobbin carrying a winding and connecting wires for dynamo electric machines.
47948. Sulzer Freres Societe Anonyme. Improvements in and relating to installations for the removal of broken threads in spinning machines and in releasable pipe connections for use therein. Releasable pipe connection between the suction box pipe end and the suction pipe leading to the nozzle.
47949. Casablancas High Draft Company Limited. Improvements in or relating to spinning and preparatory machines. (September 26, 1951.) A frame pivoted at its rear end on a fixed axis behind the drafting arrangement and adapted for association with one or set of consecutive top roller clearers.
47950. Maatschappij Voor Kolenbewerking Stamicarbon N. V. Process of preparing pure starch. Separating in hydrocyclones cell conglomerates of 80μ or larger diameter from starch paste.
47951. Maatschappij Voor Kolenbewerking Stamicarbon N. V. Process of preparing starch. Cell conglomerates are classified into two fractions, the mesh of separation being in the range between 100 and 200 microns.
47952. Standard Telephones and Cables Limited. Improvements in or relating to tinned copper wire. (September 21, 1951.) Electrolytically depositing tin and then drawing wire down to required diameter.
47953. Standard Telephones and Cables Limited. Improvements in or relating to electro-plating equipment. (September 21, 1951.) Comprising multigrooved conducting drum for passing wire plurality of times through electrolytic bath around plurality of pulleys.
47954. Standard Telephones and Cables Limited. Improvements in or relating to radio navigation systems. (December 13, 1951.) Of the type in which a directional indication is obtained at a receiving station with respect to a transmitting station by phase or time comparison between a reference, wave and a comparison or bearing wave which is derived from the received energy.
47955. Societe D'Electro-Chimie D'Electro-metallurgie Et Des Acieries Electriques D'Ugine. Improvements in or relating to the extraction of nickel from low grade ore. (July 7, 1952.) Mixing molten iron with successive charges molten low grade nickel ore and periodically with drawing the treated iron.
47956. James Mackie & Sons Limited. Improvements in and relating to cop winding machines. (August 29, 1951.) Providing means controlled by the doffing means which make the spindle stopping means inoperative for a short period after the winding is restarted.
47957. E. Uher. Improvements in or relating to electric fly-wheel starters for internal combustion engines. Flywheel rotating with rotor of electric motor and normally coupled by friction clutch with starting member fast with crank shaft, friction surfaces of clutch having greater radius than flywheel and rotor and stator of the motor.

47958. E. Uher. Power unit. Crank shaft extended through flywheel starter, mounted near the engine and opposite to driving end, and provided with means to actuate ancillary apparatus on opposite side of starter.

47959. Howards & Sons Limited. Process for the manufacture of laevulinic acid esters. (July 31, 1951.) Void after publication. In a reaction of furfuryl alcohol and a primary or secondary alcohol, the furfuryl alcohol is gradually added to the other alcohol so as to maintain a large excess of the alcohol over unreacted furfuryl alcohol.

47960. Ciba Limited. Process for the manufacture of new trisubstituted indane-compounds. Reacting indane or indene compounds with reactive esters of alcohols.

47961. Ciba Limited. Process for the manufacture of a new hydrazine compound. Reacting 3:6-dimercapto pyridazine with hydrazine.

AUGUST 27.

47962. The General Electric Company Limited. Improvements in or relating to electric carrier wave transmission systems. (August 28, 1951.) Signal pulse transmission by frequency modulation of carrier wave and amplitude modulation and addition signal transmission by amplitude modulation of carrier wave.

47963. The General Electric Company Limited. Improvements in or relating to arrangements for modulating electric carrier wave oscillations. (August 28, 1951.) The circuit includes a cathode follower stage, a bridge modulator circuit, a carrier wave oscillation generator and electrical connecting means.

47964. E. H. Watts. Improved ship's ballast tanks arranged on ship's weather decks. (June 13, 1952.) Wherein ballast tanks are arranged at least mainly on or above the level of weather deck.

47965. Bundy Tubing Company. Improvements in the manufacture of metal tubing. Continuous strip of metal moved through shaping members to form perimeter of tubes the perimeter completed by a carrier strip, coating surfaces on bond metal, and subjecting the combination to heat to melt the bond metal.

47966. Bundy Tubing Company. Improvements in the manufacture of metal tubing. A multi-ply metal tube having a longitudinal seam and having a ribbon of bond metal accommodated with a longitudinal reservoir cavity in the contacting wall of one ply prior to heating to weld the plies together.

47967. Bundy Tubing Company. Improvements in the manufacture of metal tubing. Continuous strip metal bent transversely by shaping members with opposite edges in abutting relationship and tack welded along the abutting edges, then heated to enable pressure welding, and further subjected to pressure in the heated condition.

47968. National Aluminate Corporation. Method of minimizing the production of foam in and the priming of steam generators. Adding a minor quantity of a diether of a poly-oxyalkylene glycol, to water.

AUGUST 28

47969. Void.

47970. International Harvester Company. Improvements in or relating to torque control for the vertical positioning of co-operative disk cutters for stalks. Vertical shaft of horizontal cutter disc, a threaded member engaging threaded member keyed to shaft and means for rotating first threaded member.

AUGUST 29.

47971. Void.

47972. "LICENCIA" Talalmanyokat Ertekesito Vallalat. Improvements in and relating to a tube support in motional X-Ray irradiation apparatus. Wherein a tube holder is rotatably arranged around two axes which are perpendicular to and intersecting each other.

47973. Dunlop Rubber Company Limited. Containers for storage of liquids. Comprises a spherical shaped wall of flexible material with a vent at the top and a bouyant member attached to said vent for maintaining the vent above the surface of the liquid.

47974. The Wellcome Foundation Limited. Improvements in phenyl-pyridylallyl-amines. By dehydrating with sulphuric acid a corresponding tertiary amino carbinol and separating the stereoisomers formed.

47975. Metropolitan-Vickers Electrical Company Limited. Improvements relating to magnetic core structures. (September 25, 1951.) Laminar frames having square cut joints and diagonal cut joints distributed alternately either singly or in packets of two or more.

47976. Polygram Casting Co., Limited. Improvements in synthetic resin binders for making mixtures for use in producing casting moulds, and in such mixtures. (August 30, 1951.) Comprising from 79 per cent. to 91 per cent. of a hardenable phenol formaldehyde resin or a hardenable cresol resin and from 9 per cent. to 20 per cent. of plumbago and/or terra-flake.

AUGUST 30.

47977. G. C. Kedia and M. G. Riha. Improved method of and means for manufacturing cones used in textile industry. Comprising a mould in two detachable parts combinedly forming a cavity, a core within the said cavity, means in the mould for centering the core.

47978. G. C. Kedia and M. G. Riha. Improved bobbins for use in textile and ute industry. The head and base of the bobbin being made of thermoplastic material while the shank is made of wood.

47979. Cognate with Appln. No. 47978.

47980. The British Drug Houses Limited. Improvements in or relating to a method for the preparation of aqueous suspensions of steroid hormones. (September 6, 1951.) Mixing a steroid hormone of general particle size less than 15 μ with a surface active agent and a hydrophillic colloid.

47981. Tru Colour Film Limited. Improvements in or relating to colour photography. (August 31, 1951.) Developing a latent silver image in black and white developer, bleaching the resultant image and then treating it with an aqueous liquid containing (a) an at least sparingly water-soluble thioamide or selenoamide (b) an at least sparingly water-soluble dye stuff and (c) a substance which reduces the water solubility of the silver halide or halides present in the bleached image.

SEPTEMBER 2.

47982. Council of Scientific and Industrial Research. An improved process for

electrolytic production of high purity manganese dioxide. Electrolysing a solution of manganese sulphate and sulphuric acid between antimonial lead anodes and stainless steel cathodes.

47983. Imperial Chemical Industries Limited. Water-dispersible solid compositions. (September 22, 1951.) Water-insoluble or sparingly soluble solid mixed with water-soluble salt of polysulphonated polystyrene.

47984. Ward Blenkinsop & Company Limited and The Murphy Chemical Company Limited. Improvements in or relating to the treatment of seeds and plants and compositions for use therein (November 24, 1950.) Void after publication. A solid or liquid inert carrier and an N-aryl thiourea p-carboxylic acid or an amide thereof or the salt or alkyl ester.

47985. General Electric Company. Improvements in or relating to asymmetrically conductive apparatus. Two terminal plate members secured in sealed and insulated relation to form a sealed cavity therebetween and a semiconductor, having a rectification barrier between two surfaces thereof, conductively secured at one of said surfaces to one said plate-member within said cavity and the other of said surfaces to the other plate member.

47986. Metropolitan-Vickers Electrical Company Limited. Improvements relating to electromagnetic relays. (October 5, 1951.) Two separate armatures operate associated contacts and a single magnetic structure provides magnetic circuit for the two armatures having a common portion constituting pole piece for each armature.

47987. A. Dreyer and M. De Toledo. Improvements in or relating to leak-proof containers for liquids. Conduit made of flexible material flattens itself and forms a check valve and is provided with a constriction and a bracing placed at flattened part.

47988. Void.

47989. Cognate with Appln. No. 47806.

47990. Cognate with Appln. No. 47806.

47991. E. W. Desmier. Improvements in or relating to railway crossings. Rectangular or like pieces replacing the rails are mounted on an independent plane supported on independent supports, held together.

SEPTEMBER 3.

47992. Thorn Electrical Industries Limited. Improvements in luminescent materials. (September 4, 1951.) Pyrophosphates of calcium or strontium or both, activated by cerium.
47993. Bundy Tubing Company. An improved method of, and apparatus for serving lengths of material. Comprising two movable members, the first carrying a cutting element and the second a clamp, are connected to a single power means to move relative to one another.
47994. Bundy Tubing Company. Improvements in methods of and machines for bending tubes, wire or strip material. Comprising an arm pivoted adjacent to an arbor on a fixed frame, and a second arbor carried by the arm in spaced relationship from the first.
47995. "Shell" Refining and Marketing Company Limited. Improvements in and relating to fuels for internal combustion engines. [Divided out of No. 44421; anti-dated to January 12, 1951.] Containing organic esters of oxyacids of arsenic containing at least one carbocyclic radical.
47996. T. M. M. (Research) Limited. Improvements in or relating to the manufacture of viscose. (September 4, 1951.) Delivering to a churn a stream of matured alkali cellulose, supplying carbon bisulphide to the churn, churning the mixture, delivering alkali cellulose xanthate from the churn to a dissolving and blending unit.
47997. Ciba Limited. Process for the manufacture of new hydrophenanthrene-carboxylic acids and derivatives thereof. Comprises selective hydrogenation of hydrophenanthrene-2-carboxylic acids which contain in 1-position a lower alkyl residue, in 2-position hydrogen or a lower alkyl residue, and in 7-position a free or functionally converted hydroxyl group.
47998. Void.

SEPTEMBER 4.

47999. K. N. Moorthy, D. S. Datar and S. H. Zaheer. Manufacture of sulphur from iron pyrites. Reacting in water medium hydrogen sulphide obtained by the action of steam over iron pyrites, with sulphur dioxide obtained by burning iron pyrites.
48000. The Indian Oxygen & Acetylene Company Limited. Improvements in or

relating to the drying of gases. (September 5, 1951.) Comprises heating stage, flushing stage and cooling stage.

48001. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to the purification of gases (September 7, 1951.) Passing gas mixture in co-current contact with the liquid.
48002. American Cyanamid Company. Improvements relating to the purification of impure aqueous solutions containing vitamin B₁₂ and variants thereof. Impure aqueous solution of Vitamin B₁₂ is contacted with a water insoluble zirconium compound which adsorbs the impurities and the purified solution is separated.
48003. C. B. Merry and V. Allbery. Walking cultivator. Wheels forming earth-working implements together with brake tooth device form the sole ground engaging part of the cultivator.

SEPTEMBER 5.

48004. E. T. S. Monk. Draught promoting appliance. Steam gas or liquid jet nozzle, intakes for forced and/or induced or natural draughts, passage for combining two or more draughts and discharging them and independent control means for jet and draught intakes.
48005. F. X. Fernandes de Lord. Wind worked tower clock. Clock driven by wheel under influence of weights falling in predetermined sequence, weights emptied from compartments lifted up by worm wheel driven by wind vanes.
48006. Ray-O-Vac Company. Improvements relating to primary electric batteries. Flat negative electrode, flat collector plate, and depolizer encased by a seath of flexible non-porous electrolyte resistant dielectric material.

SEPTEMBER 6.

48007. J. Pohlig Aktiengesellschaft and Braunkohlen and Brikettwerke Roddergrube Aktiengesellschaft. Conveying equipment, in particular for lignite open cut mining. Comprising a belt conveyor supported by a carrying rope, hauled by a hauling rope along the carrying rope, the belts of the conveyor being held by roller framings, the rollers being connected by axles.
48008. Void.
48009. C. W. Topley. Improvements in or relating to burners. (September 7,

1951.) Providing a vaporising bulb in the form of downwardly flared heat conducting member enclosing a fuel vaporising space, and a passage for secondary air running from top to bottom.

SEPTEMBER 8.

48010. Void.

48011. The Monotype Corporation Limited. Improved method and apparatus for producing two distinct settings from a single record strip on a record strip controlled type composing and casting machine. (May 1, 1952.) Separate settings are produced under the control of a single record strip on which controlling signals for both settings are intermingled.

48012. The General Electric Company Limited. Improvements in or relating to pressure welding. (September 28, 1951.) Comprising holding individual elements of conductor and applying pressure across the superposed conductor to cause plastic flow of materials to effect welding.

48013. H. Neidhart. Improvements in or relating to resilient systems. Comprises a unit including two resilient torsion joints comprising rigid metal body having two non-intersecting bores, two rigid metal inner members and elastically deformable members.

48014. The English Electric Company Limited. Improvements in and relating to split bearings. The facing of the cap and the corresponding facing of the bearing body along split is made sloping with respect to diametrical plane.

48015. Godrej & Boyce Manufacturing Company Limited. Improvements in or relating to hinges for cup-board and like doors and other purposes. Comprising a U-shaped bracket to whose shorter limbs extremity an angle bracket is pivoted by a hinge pin extending through aligned apertures therein.

48016. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of pure nicotinic acid. Pure colourless nicotinic acid is obtained by subjecting, a mixture of impure nicotinic acid or a compound which by thermal treatment yields nicotinic acid and an inert solvent, to azeotropic distillation. On cooling the distillate the acid separates.

48017. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Piperidiones and process for the manufacture thereof. Piperidiones with a methyl group in the 5-position are synthesised by reacting 3, 3-dialkyl-2, 4-dioxo piperidine or its N-methyl derivative with formic ester in the presence of alkali metal and reducing the 5-oxymethylene piperidine.

48018. Riv Officine Di Villar Perosa Societa Per Azioni. Process for manufacturing keys provided with figures, letters or other symbols, for registering and calculating machines, typewriters and the like. Moulding a key of plastic material, applying over the surface a sheet incorporating the symbol and finally treating by resin.

48019. The Glacier Metal Company Limited. Improvements in or relating to centrifugal separators. (September 17, 1951.) Characterised in that atleast the body part of the rotor unit is made of thin metal.

48020. Robert Bosch GMBH. Improvements in filters for liquids. Characterised by the feature that the inner and outer edges of the discs are reinforced by flow control rings having cut away parts which discs are assembled together to form a filter unit.

48021. Robert Bosch GMBH. Improvements in cellular filters. Formed of a plurality of discs of filtering material assembled with interposed disc having inlet and outlet flow control openings.

48022. Hindustan Metal Industries. Cast buckets and method of manufacture for same. Casting buckets in two independent parts and joining the two parts by soldering.

48023. Void.

SEPTEMBER 9.

48024. Hindustan Metal Industries. Improved method for manufacturing buckets. Bucket made of parts cast independently and joined together.

48025. K. K. Shah. Combined shaving brush and shaving soap stick. Comprises a tube like case to one end of which is fixed a stand having a bunch of bristles and to the other end of which is secured a cap for holding in it a shaving soap stick.

48026. Comptoir Industriel D'Etirage Et Profilage De Metaux. Improvements in or relating to die and die-holder assem-

blies for the hot extrusion of metals. Die holder assembly wherein die offers a conical outer surface, the half apex angle of the cone being larger than the jamming angle.

48027. C. Christiansen and G. O. K. Rusch. Improvements in or relating to circular looms. Means for imparting a rotating movement to the weaving ring in a direction opposite to that of the weft pressing member.

48028. C. Christiansen and G. O. K. Rusch. Improvements in and relating to woven high pressure hoses. Using nylon or the like synthetic yarn as weft after stretching the same to a degree giving a permanent elongation.

48029. C. Christiansen and G. O. K. Rusch. Improvements in the sectors of circular looms for hoses. The Sectors along its inner edge and at some distance from the said edge has a larger thickness than at the other part of the sector or is provided with a plate to guide the thread.

48030. Pirelli-General Cable Works Limited. Improvements in or relating to multi-channel fluid conduits. (September 10, 1951.) Wherein each tube is reinforced throughout its length by means of a lapping or braiding.

48031. Allis-Chalmers Manufacturing Company. Improvements in or relating to adjustable pitch sheave. Slidably mounted discs on support member axially moved toward or away from each other by screw with threaded collar engaging a slot in support member and threaded surface in one of the discs.

48032. Allis-Chalmers Manufacturing Company. Improvements in or relating to fastening device and a variable pitch pulley sheave incorporating such device. Axially movable key in keyway defined by longitudinally split tapered support and hub members for clamping the members on shaft; variable pitch pulley on hub member.

48033. Ontario Research Foundation. Controlled-density steel article of manufacture and method of producing same. (October 10, 1951.) Reducing Iron Oxide directly by reduction and introducing carbon at a temperature less than the melting temperature.

SEPTEMBER 10.

48034. Standard Oil Development Company. Improvements in or relating to fuel oil. Sulphur containing fuel oil

with 0.5 to 8 per cent. by weight of an ash forming constituent.

48035. Wingfoot Corporation. Improvements in leak detector. Including in an electric circuit a plastic element, whose electrical conductivity is affected by contact with fluid.

48036. J. Lund. Copying or tracing unit and means for, controlling the operation of copy device. (September 11, 1951.) Includes a servo control valve unit responsive to movement of a movable tracing element associated with a copy member.

48037. Void.

48038. The Osler Electric Lamp Manufacturing Co., Ltd. Improvements in or relating to ceiling fans. Top and bottom casings and upper and lower endshields are provided with central openings through which the ball bearings can be lubricated without dismantling the fan.

48039. M. P. Viswakarma. Casting hollowware metallic utensils. [Addition to No. 42514.] Employing a pattern representing one half of the hollowware, a mould box to form cavity, another mould box forming complementary part of the cavity and a device consisting of two parts representing the inner profile of the hollowware.

SEPTEMBER 11.

48040. Void.

48041. C. Shunmugam. A labour saving administrative device. [Addition to No. 41829.] Comprising a main chart fixed on a structural case containing three vertical columns, rolling charts provided therein with means for facilitating to test, slidable analytic indicator on the footing of two runner rods, indicator being provided with elongated hole, over the critical slit, corresponding to the code scale and with a top side limit plate projected to the organisation.

48042. C. Tonelli. A compressed gas motor. Rotating member provided with at least one cylinder inclined to the radial direction, the piston reciprocated in one direction by gas and in the other by a cam member.

48043. Void.

48044. Power Jets (Research and Development) Limited. An improved fluid-sealing device between relatively moving members. (September 12, 1951.)

- Providing a control chamber with a leak-in passage and a constant leak-out passage and means for applying to the seal a force in accordance with the pressure in said control chamber.
48045. J. M. Cooper. Apparatus for burning incense. Metallic tubular container having perforations throughout its length.
48046. Void.
48047. Dunlop Rubber Company Limited. Apparatus for producing moulded footwear. (September 13, 1951.) Comprising a press, a pair of galosh moulding portions located one on each side of the last locating means and means for moving the galosh moulding portions into and out of the moulding position.
48048. Standard Oil Development Company. Improvements in or relating to olefin polymerization process. Olefins are contacted with an acid of phosphorus in admixture with an organic phosphate preferably with an aryl phosphate.
48049. Nsu Werke Aktiengesellschaft. Overhead cam shaft drive for internal combustion engines. Overhead cam shaft driven by balanced crank gear mounted on case pivotable on cylinder head about axis perpendicular to cam shaft.
48050. N. R. Benchemoul. Improvements in or relating to electrical apparatus including liquid resistance. (July 14, 1952.) Comprising one or more compartments, each having two or more electrodes and each in communication with a receptacle containing an electrically conducting liquid by means of one or more passages offering resistance to flow of liquid.
48051. Standard Telephones and Cables Limited. Improvements in or relating to electric circuit arrangement. (September 14, 1951.) A track of electrical conductive material formed on a thin sheet of insulating material is integrated with a moulding powder into a solid plate.
48052. Dr. S. N. Zveibil. Improvements in awnings of metal blades or plates. Supports of the blades or plates are constituted by pantographic like articulated elements that move themselves in planes parallel to the planes of expansion of the blades, the supports being provided at their original point with a hinge by which they turn horizontally towards both sides, conveying the blades parallel.
48053. Bireswar Bysakh. An improved electric heater. Comprising a hollow tapered refractory having grooves in its inner and outer surfaces, a heating element coiled round the outer grooves, metallic foil fixed in the inner grooves.
48054. Ahura Industries. Improvements in and relating to animated toys. Comprises a plastic bulb, a plunger, a suction tube and a valve, concealed in a toy having a spraying spent attached to the bulb.
48055. Void.
48056. Siemens Brothers & Co. Limited. Improvements relating to microphones. (October 12, 1951.) Body part of the microphone formed by a flanged cylindrical outer part bonded to a cup-shaped inner part the back electrode being supported on the base of the cup.
48057. Siemens Brothers & Co. Limited. Improvements relating to electromagnetic relays and mounting arrangements therefor. (October 12, 1951.) Magnetic circuit formed by a straight core, a pole piece and a yoke piece lying in a plane parallel to but different from that of the core and parallel armature bridging the gap of pole piece and yoke.
48058. G. Ramarao. A mixture which is to be added to fuel oils used in internal combustion engines. Comprising a mixture of organic solvent, lubricants and compounds rich in carbon.
48059. E. Maier. Forms of forebodies for seagoing ships. The ends of forebody connects steep under-water frame sections with the more outflaring curved above water frame sections above the load water line.
48060. Void.

SEPTEMBER 16.

48061. B. L. Panchal. An improved bobbin. Metallic shield turned inwardly and fitted in the bore of the bobbin to form a lining between the bobbin wall and the rotating collar of spindle.
48062. Maatschappij Voor Kolenbewerking Stamicarbon N. V. Apparatus for and process of aspirating a gas or a liquid by means of a flowing liquid and dispersing the aspirated fluid in the liquid. Comprising a rotation chamber

- and an annular suction passage coaxial with the rotation chamber.
48063. Colgate-Palmolive-Peet Company. Aluminum sulfamate antiperspirant liquid. [Addition to No. 41269.] Aluminium salt of sulfamic acid dissolved in aqueous alcoholic solution.
48064. George Tucker Eyelet Company Limited. Improvements in or relating to assemblies suitable for use in blind riveting. Subjecting a blank to pressure in a die to cause extrusion of blank through an annular orifice into tubular formation and mandril is assembled, prior to extrusion, with the blank in such a manner that tubular formation is formed around a stem portion of the mandril.
48065. C. A. Parsons & Company Limited. Improvements in and relating to combustion turbine power control. (November 22, 1951.) Void after publication. Power of combustion turbine plant controlled by varying temperature of working fluid or gas entering compression by mixing varied amount of hot gas with or exchanging its heat content with gas entering compressor; hot gas extracted from cycle and its heat reintroduced into the cycle by interference with main gas flow.
48066. Void.
48067. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to tubular electric discharge lamps. Comprising two main electrodes and at least one auxiliary electrode arranged on the inner wall and connected to one main electrode and extending over at least one third of the length of the envelope.
48068. Void.
48069. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electronic register circuits. Comprising an electronic counting circuit having a number of gas filled tubes for receiving pulses, which are ignited in succession, the ignited tube being extinguished when the next following tube ignites.
48070. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to devices of the kind comprising one or more magnetic circuits. The pitch length of the magnet poles, the intermediate spacings between two adjacent poles, both measured along the pitch line, and the thickness of the permanent magnetic material measured in the direction of magnetisation, having some predetermined relations between them.
48071. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of dichloroacetoxy-amino-propanol salts. Treating D-threo-(2-dichloromethyl - oxazolinyl - 4) - p - nitrophenyl-carbinol or D-theo-2-dichloromethyl - 4 - hydroxymethyl - 5 - (p-nitrophenyl)-oxazoline with a mineral acid.
48072. Pickfords (South Africa) Limited. Improvements in and relating to moulds for the production of building blocks and the like. Comprising a mould case and an internal element receivable within the case and adapted to assist in removal of the shaped block from the case.
48073. M. Maul. Improvements in or relating to record card perforating machines. The selector bars between the key levers and the punches are in the form of translator bars provided in sets for each set of punches.
48074. Schweizerische Isola-Werke. Improvements relating to an extrusion process and a machine for the production of an insulating covering of an electrical conductor. Thermoplastic material is fed into passages in which conveyor screws are rotated about their own axis to feed the material and force it out of the orifice.
48075. J. Stone & Company (Deptford) Limited. Improvements relating to arrangements for the control of embarkation lighting on railway vehicles. (September 17, 1951.) Comprising electromagnetic switch with a main winding connected between the paralleling main and the lighting main, an auxiliary winding connected in series with the embarkation lamps between the lighting and negative mains and arranged to oppose the main winding and contacts which are closed upon the main winding is unexcited, connected in series with said lamps.
48076. R. P. Donnelly and R. Broadbent. A process for the manufacture of coked briquettes and other shapes from non-coking sub-bituminous or lignitous coals. (September 17, 1951.) Heating sub-bituminous or lignitous coals to 800°C and then mixing with binder, briquetting and carbonising.

SEPTEMBER 17.

48077. Automatic Telephone & Electric Company Limited. Improvements in housing arrangements for electrical circuit components. (September 29, 1951.) Electrical connection to and between the components is provided by

- means of external terminals mounted on the end extensions and internal terminals on shelf member.
48078. Automatic Telephone & Electric Company Limited. Improvements in circuit arrangements for generating an impulse pattern or patterns. (October 19, 1951.) Includes a ring type counting circuit of gas filled discharge tube arranged to be operated in succession under the control of applied pulses.
48079. Automatic Telephone & Electric Company Limited. Improvements in telecommunication or like systems. (October 19, 1951.) Switching operation in the individual equipment causes a circuit to be completed to take into use a first choice common equipment or causes a chain circuit to be completed to take into use a later choice common equipment.
48080. Ruhrchemie Aktiengesellschaft. Process for the production of acetals. [Addition to No. 43288.] Condensing aldehyde and alcohol using an acid catalyst in an amount constituting less than 0.1 per cent. of the reaction mixture.
48081. The Yorkshire Copper Works Limited. Improvements in or relating to blowpipes. (September 18, 1951.) Channel of blowpipe having electric heating elements disposed in the path of air, has progressively reduced cross-section.
48082. Chas. Southwell & Co. Limited. Improvements in or relating to the production of articles for the preparation of beverages and foods. (September 19, 1951.) An opensided hollow container is made from a composition containing sugar, flavouring matter is plated within the container and the open side is then closed by a composition containing sugar.
48083. Parke, Davis & Company. Improvements in or relating to the preparation of a substituted amidopropane diol. (July 22, 1952.) 2-Dichloroacetamido-1-p-nitrophenylpropane 1:3 diol is prepared by condensing-p-nitrobenzaldehyde with dichloroacetamido acetaldehyde and by the reduction of the aldol so formed.
48084. Sharp & Dohme, Incorporated. Process for the preparation of gamma-keto-tertiary amines and derivatives thereof. By heating a ketone of the formula $B-C(=O)-CH_2$, a secondary amine hydrohalide, para formaldehyde and a catalytic amount of hydrogen chloride.
48085. Void.
48086. National Moulding Co. Ltd. Improvements in or relating to combs. Moulding head of the comb and then moulding thereon teeth in another colour so as to form a single integral unit.
48087. Smith Jacking Systems Limited. Hydraulic control apparatus including a jack for controlling movement. (September 24, 1951.) Pressure fluid which effects one movement of one element on completing its movement provides flow of fluid to another jack.
48088. T. Imamura. Improvements in drafting device of a spinning machine. Each end of the top roller's arbor being held in U-shaped recess made along the upper edge of the cradle and the end is pressed down by a spring, the top end of which is held in a hook while the lower end extends to the arbor's end.
48089. T. Imamura. Improvements in a drafting device of a spinning machine. The front part of an apron is guided by a circular bar fixed parallel to the top roller on the cradle to limit the vertical space for the apron.
48090. Robert Bosch G.m.b.H. Improvements in filters for liquids. Discs are connected in the form of a strip which has cut away parts.
48091. Rudolf Blik Electrische Apparaten en Metaalwarenfabriek N. V. Improvements in or relating to suction cleaner devices. Providing the motor of the suction cleaner, on the blower side with a shaft for the detachable coupling of a brush assembly, the shaft of which is angular in cross section.
- SEPTEMBER 19.
48092. Void.
48093. L. B. Mathur, R. N. Mathur and B. S. Tawakley. Improvements in or relating to the utilization of nickel catalyst waste of hydrogenation factories. Grinding nickel catalyst waste material in an edge runner and using the pulverised mass as a pigment
48094. L. B. Mathur. Improvements in or relating to the manufacture of inks for printing or the like. By dispersing acid oil obtained from cotton seed oil soap-stock in a vehicle such as linseed oil.

48095. M. Claeys. Improvements in or relating to weft insertors. Using as weft insertors, a swivelling lever controlled by a cam mounted on the cam shaft and having a nose serving as a hinged rest for the weft.

48096. M. Claeys. Improvements in or relating to weft insertor carriages. Comprising a carriage slidable by a cable and carrying four rollers disposed in pairs the rollers supporting a weft insertors.

48097. Siemens Brothers & Co. Limited. Improvements relating to electromagnetically-operated step-by-step mechanisms. (October 5, 1951.) Overshooting of ratchet wheel prevented by tip of an armature controlled pawl which is distinct from the driving tip of the driving pawl.

48098. Imperial Chemical Industries Limited. Improvements in or relating to ventless delay electric detonators. (November 22, 1951.) Comprising igniting charge, initiating charge and short delay element enclosed in a ventless copper container, the delay element comprising a cut-off length of fuse comprising a flexible envelope surrounding a core of a nitrocellulose bonded granular mixture of silicon and red lead.

SEPTEMBER 20.

48099. Anglo-Iranian Oil Company Limited. Improvements relating to desulphurisation catalysts. (October 1, 1951.) A catalyst containing cobalt, molybdenum and fluorine as catalytic elements.

48100. G. G. Puri. Portable auto-lift hydraulic hammer pressure operated pumps. Escape valve assembly adapted to be closed by in flowing liquid, increase in pressure opening delivery valve to raise liquid.

48101. Void.

48102. Wingfoot Corporation. Apparatus for and method of preparing packages, containers such as bags or like articles from thermosealable material in particular by simultaneously edge sealing a plurality of superposed blanks. Stacking heat sealable blanks with heat stable slip sheets therebetween, holding the edges of the stack in alignment by heat stable wrappers and heat sealing edges of blanks.

48103. Universal Oil Products Company. Supported platinum catalyst and process for producing and applying the same. By impregnating porous carrier with solution of platinum compound in presence of soluble basis nitrogen compound.

SEPTEMBER 22.

48104. Void.

48105. Void.

48106. Daimler-Benz Aktiengesellschaft. Improvements relating to precombustion chamber diesel engines. (August 6, 1952.) A body presenting part-spherical surface convexly towards fuel jet supported in precombustion chamber.

48107. Void.

48108. Hard Aluminium Surfaces Limited. Improvements in anodising of aluminium and its alloys. Increasing the voltage in the electrolyte to maintain a steady current density, maintaining a temperature below 10°C and causing a relative movement between the electrolyte and the surface to be anodised.

48109. Douglas Fraser & Sons Limited. Apparatus for feeding sliver from rolls to cards, drawing frames, Spinning frames or the like. (October 25, 1951.) Stationary mounting members are connected by a single spacer parallel to the cradle-forming rollers and support a series of partitions spaced apart to accommodate a sliver roll between them.

48110. C. A. Parsons & Company Limited. Heat exchanger sealing devices. (November 16, 1951.) Comprising a housing having a recess in which a sliding seal is housed, the rear face of the seal being separated from the housing by a gap which is subdivided into compartments which are connected to the rubbing face of the seal by holes.

48111. The British Drug Houses Limited. Improvements in or relating to the preparation of 1-ortho-halogeno-phenoxy-2-hydroxy-3-aminopropanes. (September 25, 1951.) Void after publication. Reacting glycidic phenyl ether ($C_6H_4(X)O.CH_2.CH=CH_2$) with amine (R^1R^2NH); where X is chlorine or bromine while R^1 & R^2 are hydrogen, alkyl, aryl, alkaryl or heterocyclic group.

48112. Les Usines De Melle, Societe Anonyme. Improvements in process

for purifying acetone containing impurities other than methanol. Acetone is fed to middle section and boiling aqueous liquid to top section of a distilling column.

48113. Ashworth Ross & Company Limited. Improvements relating to printing mechanism for use in association with weighing apparatus. Comprises a plurality of toothed discs which in coincidence with the indicator sets a type bar relative to a printing head.

48114. Adrema Maschinenbau G.m.b.H. Improvements in tabs for insertion in the printing plates for address printing machines. With self-locking tongue on the foot of the tab, in which the foot of the tab is provided with projections spring-protruded towards both sides.

SEPTEMBER 23.

48115. Gebruder Eberhardt. Mounted disk plough. The gauge wheel lies in the region of the perpendicular longitudinal plane of the gravity of the plough and the axle of said wheel is arranged in front of the plough discs.

48116. G. Mastracchi-Manes. Improvements in or relating to sliding clasp fasteners. (July 31, 1952.) Co-operating parts of two sections are provided with protruding portions and under cut grooves beneath protruding portions for guiding a slider.

48117. Tecalemit Limited. Improvements in or relating to grease injectors. Grease discharge piston connected to compressed air operated piston and second compressed air piston connected to valve controlling inlet and discharge of grease to and from grease cylinder.

48118. Void.

48119. T.M.M. (Research) Limited. Improvements in spindle mounting for spinning, doubling and twisting machines. Wherein mounting comprises a bearing tube supported in spindle bolster by a projecting flange at point from spindle wharve to make it yield to tube oscillations.

48120. S. P. Devadoss. An automatic cigarette lighting machine and cabinet combined. Cigarette pushed from a container to a cross-shaped rotor wherefrom the cigarette is lighted by conducting with a heating element ejected out the rotor.

SEPTEMBER 24.

48121. Biro Swan Limited (formerly Biro Pens Limited). Improvements in and relating to ball tip writing instruments. (October 5, 1951.) Writing extremity is made from a tubing of diameter substantially equal to that of the ball by forming a construction in the bore of the tube producing base for the ball and deforming the end of the tube to retain the ball in the socket.

48122. Trubenised (Gt. Britain) Limited. Improvements in and relating to fused fabric assemblies and mixed fabric for use therein. Strands of thermoplastic interlining have greater thickness than that of the parallel non-thermoplastic strands of the fabrics.

48123. British Telecommunications Research Limited. Improvements in electric signalling systems. (September 27, 1951.) Arrangement for combining the output from a plurality of signal sources into a common output shunt inductance and capacitance of each source are arranged to form shunt elements of a ladder type bend-pass filter completed by adding series elements and terminated at one end by a load and at the other end by dummy load.

48124. J. R. Dalrymple. Improvements relating to baking pans for bread or the like bakery goods. Having an organosiloxane resin coating over layer of aluminium oxides on inner surface.

48125. The Director, Indian Agricultural Research Institute, New Delhi. A process for the production of a mineral supplement for food for the cattle. Containing sterilised and steamed bone meal mixed with chalk, dicalcium phosphate, salt, sulphur and iron oxide along with trace elements like iodine, manganese, copper and cobalt.

SEPTEMBER 25.

48126. Estirajes Balmes, S. A. Condensers for uniting the fibres of Textile slivers or rovings in spinning or preparing machines. The condenser is formed by the combination of the two converging fixed surfaces of the side walls and the two movable converging surfaces of the two drawing rollers.

48127. Estirajes Balmes, S. A. Improvements in the drawing mechanisms of textile machines. Applying pressure by a single resilient metal member located at the upper part of the rollers.

48128. The General Electric Company Limited. Improvements in or relating to loudspeakers having a conical diaphragm. (October 3, 1951.) Conical diaphragm provided with a rigid plug occupying 10 per cent. to 20 per cent. of space bounded by diaphragm.
48129. Midland Industries Limited. Improvements relating to temperature and/or pressure controlled valves for controlling the flow of fluids. Main valve member actuated by fluid pressure in a chamber controlled by displaceable valve member operated by a pressure or temperature responsive element.
48130. Mavor & Coulson Limited. Improvements in scraper conveyors. Pair of side by side chains attached to mineral entraining components driven along guide and housing for return run over a base plate.
48131. D. O. Hagglund and A. E. E. Jansson. A combined electrical fuse carrier and disconnecting device. Comprising stationary contact fork to grip one tongue of a cartridge, a guiding member for receiving second tongue of cartridge and a moveable disconnecter clamp having contact member.
48132. Void.
48133. Lepetit C.p.A. Method of preparing substituted oxazol-5-one compounds. By reacting a substituted or unsubstituted benzoic acid anhydride with an N-acyl derivative of glycine or a salt thereof.
48134. Lepetit S.p.A. Method of transforming substituted oxazol-5-one compounds into N-acylated aminodiols. By boiling 4(1-hydroxy-benzal) oxazol-5-one with water, decarboxylating, formylating the ketone obtained and subsequently reducing or refluxing the starting material with alcohol and reducing the keto ester obtained with LiAlH_4 .
48135. Lepetit S.p.A. Process for separating optical antipodes from racemic α -amino-p-hydroxy-aryl-propionic acid esters. By reacting the racemic ester with an optically active dibenzoyl tartaric acid, separating the salts formed and isolating the optical antipodes.
48136. Void.
48137. N. Boroevic. Improvements in or relating to a process and apparatus for printing on hosiery intended for footwear. Roller rotating along a flat stencil, has depressions for toe and heel sections of socks.
48138. Void.
48139. Void.
- OCTOBER 1.
48140. Void.
48141. Alembic Glass Industries Ltd. Improvements in or relating to closing device of aerated water bottles and the like. Provided with a screw cap with a circular opening at top and a rubber ring lining underneath.
48142. N. V. De Bataafsche Petroleum Maatschappij. Process for the catalytic cracking of hydrocarbon oils. Providing control valve in the conduit connecting gas phase above catalyst bed in stripper with gas phase above catalyst bed in reactor.
48143. Parke, Devis & Company. Process for the production of 1-p-nitrophenyl-2-acylamidopropane-1, 3-diols. Reacting acylamido- β -hydroxy-p-nitropropiophenone compound with sodium borohydride or potassium borohydride.
48144. J. M. L. F. Lebet. Method of preparation of gels, gels obtained through this method and their applications. (August 29, 1952.) Heating one or a mixture of 1000 cm^3 of hydrocarbons used as fuels with at least 2.5 grams of quinine for one minute at 55°C , filtering and cooling the filtrate.
48145. The Master Builders Company. Improvements in or relating to hydraulic cement compositions. Comprises in admixture, solids of waste sulfite liquor from which fermentable sugars have been removed and water soluble condensation products of sulfonated aromatic hydrocarbons with aliphatic aldehydes.
48146. Titan Company, Inc. A new or improved method for the electrolytic production of titanium metal. Electrolytically producing titanium by providing a fused salt electrolyte in a cell having an anode, two cathodes, and means for separating the product released at the anode from contact with cathode.
48147. H. Neidhart. Improvements in or relating to resilient torsion joints. Comprising a rigid body having a bore, a rigid inner member, spaces being formed by relative rotation of the two, between them, masses of elastic material not fully filling said spaces and a rigid flange extending from and beyond one end of each boundary portion of the inner member.

48148. Imperial Chemical Industries Limited. Improvements in or relating to closures for containers. (November 30, 1951.) Inserting clamped open end portion into resilient tube and inserting the major portion of resilient tube into permanently distortable tube and compressing latter circumferentially near its open end.
48149. Bristol & West Tar Distillers Limited. Purification of crystallisable aromatic compounds in tar distillates. Crystalline aromatic compounds, obtained from tar distillates, like crude brown naphthalene, contaminated with oil, are purified by washing with a solvent like methanol, ethanol, etc. in which the crude crystals are relatively insoluble and the oil is relatively soluble, draining away the solvent containing impurities and drying the purified crystals.
48150. Batfast Industrial Works. Improvements in or relating to hurricane lanterns and parts thereof. Draught regulator is held in position by wire bracket, the free ends of which are engaged in chimney holding piece.
48151. D. G. P. Anthony. Improvements in or relating to advertising kiosks. Wherein the display box is rotated by mechanical means operated by an electric motor housed within the display box.

OCTOBER 4.

48152. Void.
48153. Void.
48154. Dr. G. S. Tendolkar. An improved process to make iron base metal powder products such as iron-graphite porous bearings. Mixing powdered iron ore with graphite and a binder, pressing it in a die and heating in hydrogen.
48155. Colgate-Palmolive-Peet Company. Oral preparations. Comprises 5 per cent. by weight as active ingredient a higher aliphatic amide of an amino carboxylic acid compound.
48156. Colgate-Palmolive-Peet Company. Stable dental creams. Comprises calcium and magnesium polishing agents, a higher aliphatic amide of an amino carboxylic acid compound and a calcium and magnesium ion suppression agent as stabiliser.
48157. Sheritt Gordon Mines Limited. Hydrometallurgical method of extracting metal values. Dispersing metal bearing material in an aqueous ammoniacal solution containing free ammonia

and a sulphur compound, actively agitating the mixture above atmospheric pressure and temperature.

48158. Ciba Limited. Process for the manufacture of tetrahydro-pyridine compounds. [Divided out of No. 47148; ante-dated to April 22, 1952.] Splitting off a substituents in the 4 or 5 position of a 3-substituted 2, 6-dioxo piperidine with the formation of a double bond and if desired, replacing an oxygen atom for sulphur in the 2 or 6 position.
48159. E. V. Twose Limited. Improvements relating to cultivator shares. (August 1, 1952.) Having a false point in the form of an adjustable bar extending lengthwise underside the share.
48160. Power-Samas Accounting Machines Limited. Improvements in or relating to a method of and apparatus for defining characters on impression receiving material. Consisting of the steps of moving impression receiving material which determines one maximum dimension of a character, reciprocating the marking end only of a stylus in a direction normal to the direction of movement of the impression receiving material and in a path which determines the other maximum dimension of the characters and applying impulse to stylus.
48161. Venetian Vogue Limited. Improvements in or relating to venetian blinds. Lath assembly is supported so as to be movable relative to the head rail to permit the lath assembly to be raised or lowered.
48162. Edeleanu Gesellschaft m.b.H. Process and filtration with rotary cellular filters. A rotary cellular filter in which each filter chamber is associated with means for causing equalisation of pressure between pressure inside and outside the chamber.
48163. Void.
48164. G. W. Deodhar. Treatment of tamarind seeds. Heating tamarind seed with sand in an evacuated vessel to a temperature not exceeding 130°C.
48165. A. Szwajcer-Price. Improved collars and cuffs for shirts and similar garments. Having a lining of a film of polyethylene inserted between the two layers of cloth.
- OCTOBER 6.
48166. Ruhrchemie Aktiengesellschaft and Lurgi Gesellschaft für Wärmetechnik.

m.b.H. Catalyst and process for the catalytic hydrogenation of carbon monoxide. The catalyst has an alkali-metal content, as K_2O , of 2-6 per cent., an SiO_2 content of 5-15 per cent., a free iron content of 10-50 per cent., all based on total amount of iron in the catalyst, and an internal surface area of 180-230 sq. meters per gm. of iron in the reduced catalyst.

48167. Ruhrchemie Aktiengesellschaft and Lurgi Gesellschaft für Warmetechnik m.b.H. Iron catalyst for the hydrogenation of carbon monoxide giving a high yield of gasoline-like hydrocarbons. The catalyst has a free alkali metal content, as K_2O , of 0.5-2 per cent., an SiO_2 content of 0.5-5 per cent., a free iron content of less than 50 per cent. all based on total amount of iron in the catalyst, and an internal surface area of 110-180 sq. meters per gm. of iron in the reduced catalyst.

48168. Ruhrchemie Aktiengesellschaft and Lurgi Gesellschaft für Warmetechnik m.b.H. Process for the catalytic reaction of gases containing carbon monoxide. Part of CO is oxidised with steam to yield CO_2 and hydrogen, and the resulting gas mixture is subjected to effect hydrogenation of carbon monoxide.

48169. Titan Company Inc. Composite lead chromate lead silicate pigment. (September 26, 1952.) Comprising PbO , CrO_3 , and SiO_2 in physico-chemical combination, there being 2 to 10 mols of PbO for each mol of CrO_3 and from 0.75 to 7.5 mols of SiO_2 for each mol of PbO .

48170. Ciba Limited. Process for the manufacture of steroids having oxygen in 11-position. Treating sulfonic acid ester of 11 β -acyloxy-12 α -hydroxy steroids with hydrolysing agent, splitting resulting 11:12 β oxides with acids and removing the substituent in 12 position of the product by reduction.

48171. Void.

48172. T. Imamura. An improvement in a cradle for drafting device of a spinning machine. The back end of the cradle is held on a cradle bar while its front end is raised and automatically steps at an angle on the cradle bar.

48173. The Clyde Rubber Works Company Limited. Pad for use with flat bottomed rails. Wedge shaped slab of resilient material with grooves in one face being disposed at right angles to the grooves in the other face.

26 Patent/57.

48174. C. S. Prendergast and H. Gordon. Improvements relating to pumps and motors. (October 23, 1951.) Periphery of sator formed of arcs which impart predetermined rate of radical acceleration and deceleration to the abutments which are radially slideable.

48175. Harry Ferguson Inc. Improved overload release valve. Device operable on overload unseats valve element which causes a piston element to be moved so as to open the valve element further.

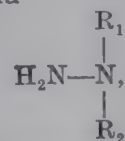
48176. Ciba Limited. Process for the manufacture of thioketopiperidine compounds. [Divided out of No. 47192; ante-dated to April 28, 1952.] Replacing oxygen by sulphur in 3-aryl-2, 6-dioxopiperidine substituted in the 3-position by an aryl, alkyl or aminoalkyl residue.

48177. G. & J. Weir Limited. Evaporating plant. (July 4, 1952.) An evaporating plant comprising evaporator, a direct contact heating vessel and distilling condenser plant.

OCTOBER 7.

48178. Void.

48179. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Derivatives of isonicotinylhydrazine and process for the manufacture thereof. Reacting isonicotinic acid halide with substituted hydrazine of formula



in presence of acid binding agent.

48180. Void.

48181. Dr. Ing. G. Niemann. Improvements in worms for worm gearing. the profile of the flank of the tool is a curve which is made with simple mechanical gearing.

48182. I. Uozumi and K. Nitta. Locking device for nuts. A projection formed inwardly at a central hole of a washer having a circular flanged rim portion provided at its periphery.

48183. Ciba Limited. Process for the manufacture of dry dyestuff preparations. Sulphuric acid ester of leuco vat dyestuffs in the form of a soluble salt is subjected to drying by spray drying.

48184. Hardman & Holden Limited. Improvements in the colouration of mixed textile materials. Applying a colour-

ing composition containing a vat dyestuff, a vat dyestuff leuco ester and thiourea dioxide and subjecting the material to a temperature of 100°C.

48185. Wingfoot Corporation. Improvements in disc brake. Auxiliary piston in a multiple disk type of brake initiates movement of the centre carrier plate.

OCTOBER 8.

48186. Void.

48187. Void.

48188. Void.

48189. D. Hoskins. Improvements in devices for destroying vermin. The device comprises a hollow casing, containing an insecticide, which when wormed by a bird sitting on the device generates insecticidal vapour which is discharged through an opening.

48190. Ets. Geeraert and Matthys, Societe Anonyme. Improvements in or relating to processes for bleaching textile fibres. Alkyl aryl sulfonates are employed in the form of salts by keeping the bath alkaline.

48191. Aktiebolaget Bonthron & Ewing. Heat operated pump for instance for burners operating with liquid fuel. Liquid, in a closed circuit including a boiler heated by the burner, causes a diaphragm to pump fuel.

48192. North American Aviation, Inc. Improvements in or relating to a rivet or bushing. Comprising a pin with curved end and a collar, to receive the pin, with uniform interior diameter for major length and of decreasing inwardly curved interior diameter for the remainder, the curve of the end of the pin being such that line contact initially obtains between the pin and the portion of the sleeve engaging during the driving of the pin in the sleeve.

OCTOBER 9.

48193. Southern Dyestuff Corporation. Aqueous solution of reduced indophenol sulfurised vat dyestuff. Comprises 3 to 15 per cent. of a hydrotropic agent and having a caustic alkalinity of 2 to 4 per cent. and a high concentration of dyestuff.

48194. Southern Dyestuff Corporation. Concentrated ready-to-dye liquid sulfur dyestuffs. Comprising 3 to 15 per cent. of a hydrotropic agent and having a caustic alkalinity of 2 to 4 per cent. and a high concentration of dyestuff.

48195. Southern Dyestuff Corporation. Preparation of liquid indophenol sulfurized dyestuffs. (April 15, 1952.) Thionating the indophenol dyestuff components in the presence of a chemical compound selected from sodium sulphonates of toluene, xylene, cymene, dimethyl aniline and tetrahydronaphthalene, and then solubilising said mass with water and alkaline sulphides.

48196. The General Electric Company Limited. Improvements in or relating to mine winders and the like and control apparatus therefor. (January 10, 1952.) An inductor member consisting of an electric transformer having a winding arranged to be energised with alternating current and two windings or two groups of windings mounted on the same core.

48197. Tecalemit Limited. Improvements in or relating to couplings for use with grease guns or like apparatus. (October 10, 1951.) An inherently resilient locking member is fitted in a recess formed in the body forwardly of the seating and rearwardly in an opening of the body.

48198. Ford Motor Company of Canada, Limited. Improvements in and relating to door-latch mechanisms particularly for motor vehicle doors. Of the type having a rotatable bolt and a rotatable ratchet controlled by a pawl which is engaged by an actuating member to release the bolt from the keeper.

48199. Inland Steel Company. Improvements in or relating to furnace structure. Comprising furnace end sections having walls forming a single uptake passage having a vertical lower portion and an upper portion communicating with the hearth-section.

OCTOBER 10.

48200. Void.

48201. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to the manufacture of amino-acetal. (August 18, 1952.) Vinyl ethyl ether is reacted with ethyl nitrite and the resulting nitro-acetal is reduced to amino-acetal.

48202. Societe Des Usines Chimiques Rhone-Poulenc. Production of amino-acetal. (August 18, 1952.) Vinyl ethyl ether is reacted with nitrosyl chloride, the product treated with ammoniacal ethyl alcohol and the resulting compound subjected to reduction.

8203. Sendel Limited. Improvements in or relating to index files. (November 1, 1951.) Provided with a number of index strips extending from the rear ends forwardly and overlapping side-ways across the file.

8204. Sendel Limited. Improvements in or relating to index files. (November 1, 1951.) Files provided with index strips, each strip except the last lying within the next folded strip.

OCTOBER 11.

48205. Void.

48206. B. V. Pusalkar. Improvements in horizontal corn grinding mill. With revolving bottom stone fixed to a shaft which does not move in vertical plane, and a steady upper stone suspended on a hollow ball and socket joint which gets self aligned, pressure kept on the upper stone by four compression springs by a threaded collar, the ball socket which is lifted or lowered and collar clutch for disengaging the stones when necessary.

48207. The Permutit Company Limited. Improvements relating to the control of the mixing of liquids. (October 26, 1951.) Wherein blending is controlled by comparing the electrical conductivity of blended stream at successive parts.

48208. Perfogit Societa per Azioni. Method and device for temporarily discontinuing the flow of molten materials, especially synthetic linear polymers, within an apparatus. Device for temporarily discontinuing flow of molten materials within an apparatus particularly for spinning synthetic linear polymers from the melt.

OCTOBER 13.

48209. "Shell" Refining and Marketing Company Limited. Improvements in and relating to fuel oils and the combustion of fuel oils. (October 15, 1951.) Comprising a high ash residual fuel oil and a content of phosphorus or of a metal free organic or inorganic compound of phosphorus other than an oil-soluble organic compound of phosphorus.

48210. A. Coyne and J. Bellier. Method of and apparatus for reinforcing and stabilizing structures, and particularly dams. Braces arranged externally of the face of the structure, anchored in

the ground and on the top of the structure with means being provided for compensating bending moment by secondary braces on opposite side of main braces.

48211. Titan Company Inc. A new or improved process for the production of refractory metals. Comprising the use of fused halide salt electrolyte the metal halide to be reduced is continuously introduced below the surface of the electrolyte and concurrently passing electric current, the metal halide added in juxtaposition to cathode.

48212. Titan Company Inc. A new or improved method for refining titanium metal. Passing electric current through an electrolytic cell having an anode of impure titanium metal, a cathode and an electrolyte compound of at least one halide salt of an alkaline earth metal and further containing lower titanium chlorides.

48213. Hararwalla Engineering Works. Improvements in or relating to mechanised toys, and the like. Comprises of a wheel fixed to a main driving axle, the said wheel has its portion or portions integrally forming a set of gear teeth at right angle to the said wheel, and a pinion fixed to one end of the axle.

48214. J. Dionisotti. Improvements in steel cutting plane carbide tipped rock-drill. Comprising carbide tipped rock-drill having longitudinal surfaces thereof flaring both in the direction of longitudinal axes and in the direction leading from their inner to outer ends to provide a secure fixation.

48215. C. A. Parsons & Company Limited. Improvements in and relating to gas turbine plants. (December 13, 1951.) Metering device and ducts arranged to make a full steam supply available at reduced load, by tapping hot air from work turbine exhaust.

48216. Ray-O-Vac Company. Improvements relating to electrical primary batteries. Prefabricated combination jumper insulator placed between pairs of juxtaposed sheathed stacks of cells.

48217. J. Stone & Company (Deptford) Limited. Improvements relating to cooling arrangements using eutectic solutions. (October 18, 1951.) Comprising tank containing eutectic solution, means for cooling said solution and means for promoting circulation of the solution.

48218. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Derivatives of isonicotinylhydrazine and process for the manufacture thereof. Reacting isonicotinylhydrazine with acid halide or anhydride.
48219. Standard Telephones and Cables Limited. Equipment for the capacitive or complexive balancing of telecommunication cables. In which bushes of insulating material are provided at their two ends with narrow short slots into which at the assembly either the connecting wires of the electrodes of the equalising elements are pressed.
48220. Standard Telephones and Cables Limited. Splicing or balancing sleeve for telecommunication cables. Insulating tubes surrounding the wire cable splices of individual wires, pairs, or quads of the cable core are arranged belt-like on cylindrical supporting bodies.
- OCTOBER 14.
48221. Ramkumarlal and T. Lakshmanachari. Hindi typewriter key board. Letters provided on the key-board such that they follow the same sequence as in the alphabet as detailed in groups 1 to 6 described in the specification and shown in the drawings.
48222. Void.
48223. British Insulated Callender's Cables Limited. Improvements in tensioning means for strips of paper and other material when being drawn from or wound on to a reel or other support. (October 24, 1951.) A system of guides providing a path in which the strip is bent back on itself to move over a support twice, the strip moving in opposite directions exerting a frictional contact.
48224. Jeewanlal (1929) Limited. Improvements in or relating to coffee percolators. A removable coffee holder is screwed into a vessel leaving little space from the bottom of the vessel, both the holder and the vessel having perforated bottoms.
48225. C. S. St. John Evers and E. Wall. Improvements in agricultural and like spraying equipment. Provided with a relief valve comprising a casing connected through a pipe to the supply tank of the pump, said casing having a tube one end of which is connected to the pressure line and the other end is normally sealed by a spring-biased diaphragm.
48226. C. E. St. John Evers and E. Wall. Improvements in agricultural and like spraying equipment. Provided with a series of nozzle fittings each comprising a tube extending to the top of the bore of the boom, each said tube being provided with a valve for automatically lowering the pressure in the solution inside the booms.
48227. C. E. St. John Evers and E. Wall. Improvements in agricultural and like spraying equipment. The outlet from the pump is connected to the booms through a two-position three-way cock and a relief valve is provided to relieve the pressure, when the outlet from the pump is shut off from the booms.
48228. Void.
48229. Wolf-Gerate GmbH. Weeding hoe. Comprises a front and a rear edges the blade and wing portions constituting a single sheet metal member and a handle socket.
48230. Chubb and Son's Lock and Safe Company Limited. Improvements in and relating to permutation locks. (December 10, 1951.) Including a rotatable driver with a peripheral recess, a lever adapted to engage the recess to operate lock bolt, control elements requiring presetting before permitting the lever to engage the recess and means for preventing the lever from contacting with the sides of the recess during rotation of the driver, when not in engagement with the recess.
48231. Glenfield & Kennedy Limited. Improvements in or relating to hydraulic installations. (November 17, 1951.) Void after publication. Gate located outside the passage and movable bodily across orifice in guideways disposed a distance apart greater than the width of the orifice.
- OCTOBER 15.
48232. The General Electric Company Limited. Improvements in or relating to a method and apparatus for drawing wire through dies. (October 16, 1951.) Metal wire is drawn through a die which is mounted so as to rotate under the pull of the wire.
48233. Titan Company, Inc. Optically glass-like material and lenses, prisms, gems and other optically refracting members composed of it. Consisting of a monocrystalline mass of strontium titanate formed by confusion of strontium titanate particles.

48234. N. V. De Bataafsche Petroleum Maatschappij. Process for separating one or more solid hydrocarbons from a mixture thereof with oil, in particular for dewaxing paraffin wax containing oil. (December 19, 1951.) The mixture of solid hydrocarbons with oil is mixed with an organic solvent which dissolves the oil but not the solid and then with an auxiliary liquid, which is unreactive and immiscible with the oil phase and having a different s.g., in the presence of a surface active agent such that the contact angle θ has a value of at least 90° .

48235. Anstalt fur die Entwicklung von Erfindungen und gewerblichen Anwendungen Energa. Finned projectile. Each of the fins extending in the folded position beyond the rear of the projectile while finning is opened out on leaving gun barrel by the residual thrust of gases of firing charge.

OCTOBER 16.

48236. Void.

48237. United States Steel Corporation. Method and apparatus for gaging and classifying sheets or the like. Includes two or more conveyors in tandem over which the sheets pass, a deflector between adjacent conveyors and deflector operator responsive to gage.

48238. Texaco Development Corporation. Improvements in or relating to a four stroke internal combustion engine. Cross section of air intake changed progressively devoid of portuberances so as to discharge air in to cylinder at an acute angle substantially less than 90° to plane normal to air swirl axis air discharge portion being removed from swirl axis and opening in the direction of swirl.

48239. Riker Laboratories, Inc. Improvements in or relating to hypotensive compositions and methods of making the same. By obtaining a solution of Veratrum alkaloids in a non-oxidizing, non-reducing acid, adding sulphate ions, rendering the solution alkaline to produce a precipitate from which alkaloids soluble in benzene are recovered.

48240. Vereinigte Kugellagerfabriken Aktiengesellschaft. Bearing application for spinning doubling spindles. The centering of the footstep in conjunction with an abutment disposed at the free spindle bearing end being achieved in

the area of the bottom face of the footstep bearing upon a centering element.

48241. Void.

48242. O. Colquitt. Method and means for circulating mud in rotary well drilling rigs. Means for circulating mud in wells enabling the mud to descend in the well proper and ascend through a drill pipe.

48243. T. W. Mullen. Rodenticide dispenser. Comprising a housing in whose top opening vessel containing rodenticide is secured in a way to discharge the contents onto a pan within the housing.

48244. G. T. Dholkawalla. Improvements in or relating to a "Receptacle or device for storing stationery articles and the like". The receptacle comprises a box having at its upper end portion longitudinal grooves on the inner surface of the side-walls which receive a cover resembling a foot ruler with a slot or receptacle which receives a pencil sharpener.

48245. Poonamchand & Brothers Ltd. Improved rotor-spindle and bearing assembly for watt-hour electric service meters. Rotor spindle with a recess at top end containing lubricant supported on a top-bearing consisting of steel pin projected into the recess, and a bottom bearing consisting of funnel-shaped pivot receiving bottom end of rotor-spindle, the funnel supported on a ball-ended pivot supported on jewel-cup mounted on a jewel-mount fitted to an adjustable springloaded sleeve sliding inside adjustable screw.

48246. Ahura Industries. Improvements in or relating to gyro-top and the like toys using gyroscope principle. Comprises a heavy spinning wheel mounted in a frame of two rings, and a pulley wheel which has a fractional contact with the spinning wheel spindle.

OCTOBER 17.

48247. P. Runchhoddas. Improvements in spring loaded roller blinds. One end of the blind is secured to a spring loaded roller and the other end secured to an adjusting rod carrying at its two ends elements guided by guide members.

48248. The Distillers Company Limited. Manufacture of organic nitriles. (October 18, 1951.) Catalytically oxidising olefines and converting the aldehydes formed to nitriles.

48249. The General Electric Company Limited. Improvements in or relating to lighting fittings. (October 18, 1951.) There are provisions for mounting a lamp within a housing, a reflector for concentrating light.
48250. Tootal Broadhurst Lee Company Limited. Process for the treatment of fabrics with resinous condensation products. (October 19, 1951.) Impregnating the fabric with a solution of aminoaldehyde resin-forming ingredients containing an acidic catalyst followed by heating the impregnated fabric to form the resin and further heating the resulting resin-containing fabric in an atmosphere of superheated steam.
48251. Tecalemit Limited. Improvements in or relating to filtering elements for filters for liquids. (October 19, 1951.) Comprising a tubular unit made up of 2 felt or like medium and a rigid perforated supporting frame to which the felt is secured by an adhesive.
48252. Merck & Co. Inc. Preparation of N-allylnormorphine. Reacting equal molar equivalents of normorphine and allyl halide in anhydrous organic solvent in the presence of molecular excess of an acid-binding agent.
48253. Johnson and Phillips Limited. Improvements in or relating to sealing glands. (November 28, 1951.) Comprises a sleeve and cam means for exerting inward pressure on the sleeve.
48254. Maatschappij Vood Kolenbewerking Stamicarbon N. V. Process for regenerating an ion exchanger. Dividing the series of columns into two groups, and after one operation cutting out the first column of the first group, making the first column of second group the last of the first group and introducing a new column at the end of the second group.
48255. T. M. M. (Research) Limited. Improvements relating to textile spinning and analogous machines. (October 18, 1951.) Means for drawing upwardly the ends of the yarn out of the influence of the anti-ballooning appliances on the tips of the spindles.
48256. K. V. Nayagar. Improvements in or relating to padlocks. An independent key hole disc is mounted rotatably in a housing in the cover plate, which housing has openings for insertion of key.
48257. Void.
48258. Timboga Corporation. An improved pencil point protector. The protector comprises a tubular body, one end of which is closed by an eraser tip, thereby forming an enclosure for receiving the sharpened end of the pencil.
48259. Timboga Corporation. Improvements in or relating to weight lifting exercise apparatus or the like. Bar bell, dump bell or swing bell is characterised in that the weight-system of the apparatus is provided with a peripheral protection member, so located as to absorb the shock of impact, when the apparatus is put on the floor.
48260. Rheinpreussen Aktiengesellschaft fur Bergbau und Chemie. Stocking and stowing device for travelling grates (October 31, 1951.) Blades are fixedly mounted on a rotatable shaft which blades extend over the width of the grate whereby the shaft rotates, a force is applied to the fuel in a direction opposite to that of its movement in the grate.
48261. Colgate-Palmolive Company. Fermentable carbohydrate food products. Mixed with higher amide of an amino carboxylic compound as preservative.
48262. Imperial Chemical Industries Limited. Improvements in or relating to the recovery of glycerol. (December 3, 1951.) Mixing concentrated fermentation liquor with granular material continuously agitating said mixture while heating under reduced pressure.
48263. Studi E. Brevetti Applicazioni Tessili s.r.l. Method and apparatus for the continuous spinning of artificial textile fibres. A thread-storing thread-advancing device comprising a processing roller divided into processing zones corresponding to the several processing steps to be performed on the thread, separation members between the processing zones and means for feeding processing liquors.
48264. Yorkshire Switchgear and Engineering Company Limited, and G. Caton. Improvements in electric circuit breakers. With main contacts on fixed structure and movable structure with contacts and having one chamber or more, housing arcing contact means for arcing elements with liquid communication between the contacts through the structure, the internal facing of the chamber walls being of insulative substance and the movable structure being of narrow width.

OCTOBER 20.

48265. N. M. Elias. Concentrated foam-producing spermicides. Comprising a sponge soaked in spermicidal concentrate containing as active ingredient a polyethylene glycol monoether of alkyl phenol.

48266. Electrolux Corporation. Improvements in and relating to suction cleaners. Having a housing, an opening, a closure member and a withdrawal means comprising an arm extending from the closure member into engagement with a dust container.

48267. Unilever Limited. Improvements in or relating to margarine. Cooling and agitating fat to precrystallise higher boiling point glycerides, but not those with lower boiling point, super cooling, and then mixing with aqueous ingredient.

OCTOBER 21.

48268. Dr. P. Niehans and L. Schwander. Method for preserving organ cell preparations. Freezing the organ cell preparations and removing the cell water by sublimation.

48269. Durand and Huguenin A.-G. Process for the manufacture of salts of sulphuric acid esters of leuco vat dyestuffs of the anthraquinone series. (Addition to No. 44816). Using instead of or in addition to finally divided copper or brass, at least one finely divided metal of the iron group.

48270. Imperial Chemical Industries Limited. Improvements in or relating to the recovery of glycerol. (December 3, 1951.) Mixing powdery material with fermentation liquor and leaching the mixture with glycerol solvent of lower-boiling point and to separate glycerol therefrom by evaporation.

48271. Imperial Chemical Industries Limited. Improvements in or relating to the recovery of glycerol or of 2:3 butandiol from liquors containing one or other of said compounds as a product of fermentation of carbohydrates. (December 3, 1951.) Passing superheated steam through continuously renewed fluidised bed of mixture of granular material and concentrated fermentation liquor and collecting to condensate.

48272. Power Jets (Research & Development) Limited. Improvements relating to mine air-conditioning arrangements. (October 29, 1951.) Comprising a closed

cycle gaseous refrigerant unit embodying rotary compression and expansion machines.

48273. Feinmechanik G.m.b.H. Device for securing work pieces or the like on holding elements, for example machine tables. Clamp member adjustable transversely of bolt on lower part of device rotatable about bolt and having arm co-operating with stepped equalizing member swivellable about bolt.

48274. Void.

48275. Council of Scientific and Industrial Research. Waterproofing of boards used for sound-proofing purposes. Treating sound-proof boards with wetting agent, dipping the boards in latex compounded with stabiliser, zinc oxide, sulphur, accelerator and antioxidant, and vulcanizing the dipped boards.

OCTOBER 22.

48276. L. F. Guimbretiere, A. G. Pollet and E. J. Sorez. Improvements in or relating to methods for drawing sheets of fibres and machines therefor. Clamping the fibres along the free edge of the sheet, removing the fibres from successive fractions of the breadth of said free edge the cycle of operation being repeated, the removed fibres being aligned in overlapping relationship to form a sliver.

48277. Void.

48278. Ciba Limited. Process for the manufacture of compounds by a method including the step of opening ring C. in steroids. Treating 11-Oxo- or 11-hydroxy-steroids saturated in the ring C, which contain in 7-position at least one hydrogen atom, with oxidizing agents, causing these agents to act upon 11:12-dioxo-9-hydroxy-steroids or 11-oxo-9:12-dihydroxy-steroids.

48279. G. M. Garde. A copolymer for treatment of textile material. The condensation product obtained by reacting a polymeric polyhydric alcohol with an aldehyde in the presence of an alkali is treated with that obtained by reacting a ketone with an aldehyde in the presence of an alkali to form a condensation copolymer.

OCTOBER 23.

48280. Void.

48281. R. W. Pointer and Leon B. De-long. Improved platform structure for

marine and like use and methods of using the same for pile driving and other purposes. Platform body with guides for supporting columns or piles and containing fluid pressure actuated jack mechanisms for driving and removing columns or piles.

48282. Ford Motor Company of Canada, Limited. Motor vehicle chassis construction. A torque arm connecting the differential unit to the engine unit balances torque reaction in the differential unit by the torque reaction in the engine.

48283. Ford Motor Company of Canada, Limited. Door checking and holding device for motor vehicles. A second roller is pivotally and slideably mounted between straps and arranged to engage opposite edge of the check arm.

48284. Svenska Aktiebolaget Bromsregulator. Improvements in automatic slack adjusters for brakes. Feeding and coupling nuts held clutched to operating member when, in the normal position, it is intentionally rotated to increase slack between tubular rod and screwed spindle of brake rod.

48285. Void.

48286. Void.

48287. Hindusthan Plastics Limited. A game of skill. Comprising a box having a series of straight ribs having one or more recesses formed therein for one or more balls to enter the recesses.

48288. Hindusthan Plastics Ltd. An improved key chain attachment. Comprising a plastic body having within it a spring-load plunger with a tongue piece attached to it which projects out when plunger is pushed in.

48289. C. V. Blumfield. Improvements in or relating to roof constructions. Formed of two spaced transverse stiffening members, a plurality of spaced longitudinal members, at least one layer of spaced transverse members, and bracing members secured at an angle to some of the longitudinal and traverse members and to some stiffening members.

OCTOBER 24.

48290. PERFOGIT Societa per Azioni. Melting method and apparatus for the melt-spinning of polymer substances that are substantially stable in the molten state. Heat imparted to a mixture of solid polymer and liquid polymer

and liquid polymer flows away while solid polymer is fed to the mixture.

48291. Perfogit Societa per Azioni. Textile fibres crimping device. Crimping is effected by introducing the filaments in crimping chamber formed by two propelling rollers and two subsidiary rollers.

48292. Ciba Limited. Process for the partial elimination of oxo groups. Heating α -dioxo-compounds of the steroid series, their enols or enolates to a temperature above 175°C with hydrazine in the absence of a basic alkali metal compound.

OCTOBER 25.

48293. K. V. Karantha. Reinforced concrete poles from pre-cast component pieces. At the jointing end of each short length component piece, a steel plate is provided having holes corresponding to the positions of the projecting reinforcement rods which are bolted down on the jointing faces by nuts.

48294. Void.

48295. The Distillers Company Limited. Purification of penicillin. (October 26, 1951.) [Addition to No. 42492.] By treating penicillin with oxycaïne and decomposing the resulting oxycaïne penicillin under acid conditions to liberate the penicillin.

48296. M. C. Desai. Device for guiding yarn, thread or the like. Comprising an open-ended tube provided with a gap in a wall of the tube extending the length of the tube and enabling a yarn to be introduced into and withdrawn from the tube through the said gap.

48297. Rolladenfabrik A. Griesser A.-G. Venetian blind. Blind lifting shaft is connected by means of a friction clutch with the tilt members mounted on the shaft to enable tilting of the slats in any position of the blind.

48298. E. E. White. Improvements in or relating to wheel guide for guiding motor vehicles to parking stalls and the like. [Divided out of No. 45781; ante-dated to September 1, 1951.] Traction surface converge towards the rear of a substantially horizontal traction surface on a bed plate.

48299. Colgate-Palmolive-Peet Company. Chlorophyll dentifrice compositions. A composition comprises at least one water insoluble calcium compound, a water soluble chlorophyll compound

and a water soluble alkali metal salt of orthophosphoric acid, pyro-phosphoric acid, tri-polyphosphoric acid, citric acid, silicic acid, gluconic acid or ethylene diamine tetraacetic acid.

48300. K. P. Trivedi. Improvements in or relating to "Over-shoes and the like". An overshoe of waterproof material has a shoe tongue resembling U-shape, which is stitched or otherwise mated to form integral with the inside toe point and side flaps extending from its toe point to the upper end portion of the shoe and having means to close the side flaps.

OCTOBER 27.

48301. Rheinpreussen Aktiengesellschaft für Bergbau und Chemie. A process for the production of 4-mono-alkyl-amino-salicylic acids and 4-mono-alkyloxy-alkylated amino-salicylic acids. (July 30, 1952.) By subjecting 4-amino-salicylic acid to alkylation with an alkyl or alkyl-oxy-alkyl halide or with an aldehyde or ketone with hydrogenation of the alkylidene compound formed

48302. Rheinpreussen Aktiengesellschaft für Bergbau und Chemie. Process for the production of 4-mono-alkyl-amino-salicylic acids and 4-mono-(alkyl-oxy-alkyl)-amino salicylic acids. (August 1, 1952.) By reacting an amino phenol substituted at the nitrogen atom by an alkyl or an alkyl-oxy-alkyl group with carbon dioxide.

48303. Rheinpreussen Aktiengesellschaft für Bergbau und Chemie. A process for the production of hydrocarbons and oxygen-containing organic compounds. (July 28, 1952.) By effecting the catalytic hydrogenation of carbon monoxide with water vapour or steam.

48304. Rheinpreussen Aktiengesellschaft, fuer Bergbau und Chemie. Process for the production of amino esters of amino-hydroxy-benzoic acids. (August 1, 1952.) By reducing an alkyl halogen ester of a nitro-hydroxy-benzoic acid, and then reacting with an amine containing a reactive hydrogen atom.

48305. Rheinpreussen Aktiengesellschaft für Bergbau und Chemie. A process for the separation of carbon dioxide and hydrocarbons. (August 1, 1952.) By absorbing carbon dioxide in a solution of a salt.

48306. Rheinpreussen Aktiengesellschaft für Bergbau und Chemie. Process for

the production of salts from organic acids and alkamine esters of unsubstituted amino-salicylic acids or of amino-salicylic acids substituted at the nitrogen atom. (July 30, 1952.) By reacting the alkamine ester or a mineral acid salt thereof with an organic acid or a salt thereof respectively.

48307. Rheinpreussen Aktiengesellschaft für Bergbau und Chemie. A process for the production of hydrocarbons and oxygen-containing organic compounds. (July 21, 1952.) Catalyst contains a metal of the 8th group of the periodic system, which metal is present in the form of a nitride to the extent of 50% or more.

48308. K. Popp. Procedure and device for preserving plant and animal products and preservative agents therefor comprising effective ingredients of officinal aromatic plants and adhesive carrier material.

48309. Borax Consolidated Limited. Amorphous weed-killer compositions and their manufacture. Spraying an aqueous solution of chlorate (as refined), sodium borate and water soluble solids in hot air.

48310. Thorn Electrical Industries Limited. Improvements in supply circuits for electric discharge tubes. (October 31, 1951.) Of the kind adapted on A.C. current and including two electrodes between which alternating current discharge take place.

48311. Emhart Manufacturing Company. Improvements in or relating to apparatus for and method of making glass. Having a channel with a length from 20 to 40 feet and a width not more than 8 feet, the ratio of length and width being always from 4:1 to 7:1.

48312. Compagnie Internationale des Pieux Armes FRANKIGNOUL. Method and device for forming reinforced foundation piles with an enlarged base. A rigid body secured to upwardly extending rigid members located at predetermined distance below foot of driving tube and concrete expelled laterally, with the body as acting deflector, to form enlarged base.

48313. Compagnie Internationale des Pieux Armes FRANKIGNOUL. Machine moveable all directions for driving piles and the like. Machine platform and supporting plate secured to two elements of vertical jack, a frame with

rollers engaging circular track on supporting plate, angular displacement between the frame and platform during their relative vertical movement is prevented and enclosure longitudinally movable affording support for the machine when the plate is lifted.

48314. American Home Products Corporation. Improvements in or relating to the preparation of water-insoluble penicillin salts and the salts produced thereby. By reacting a salt of penicillin with an alkylene diamine salt in an aqueous medium.

OCTOBER 28.

48315. N. Padmanabhaswami. An apparatus to demonstrate the working of the heart and the circulation of blood in the human body. Comprising two hollow glass models connected by rubber tubing with rubber bulbs fitted below and having an arrangement of valves to enable a liquid to flow in a unidirectional direction.

48316. E. V. Kaick and H. Hess. Internal pole generator for rotating or alternating currents. In which an additional variable tension corresponding to the variable loads of the machine to coincide with the fundamental exciter tension.

48317. Dunlop Rubber Company Limited. Improvements in or relating to belting and the manufacture thereof. (November 8, 1951.) [Addition to No. 30758.] Comprising one or more plies of textile fabric in combination with a flexible composition containing a polyvinyl compound.

48318. Dunlop Rubber Company Limited. Improvements in or relating to belting and the manufacture thereof. (November 27, 1951.) [Addition to No. 34816.] Comprising one or more plies of textile fabric in combination with a flexible composition containing a polyvinyl compound, each ply having one set of weft threads and two sets of warp threads.

48319. The British Cotton Industry Research Association. Improvements in or relating to dobbies for looms. Including two oppositely oscillating knives or griffes and plurality of baulks each having a hook pivotally attached to each end thereof by means of which the baulks are oscillated by the knives to effect shedding.

48320. International General Electric Company of New York Limited. Improvements in or relating to automatic lamp base threading machine. Comprising a holding device for the bulb, a device for feeding and locating the lamp base over the bulb and means for agitating the base for the lead-in wire which is vertical to enter the contact hole in the base.

48321. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to cathodes for discharge tubes. Internally provided with alkaline earth metal compounds yielding oxides upon heating and disintegration without causing oxidation of the refractory metal such as tungsten, molybdenum, tantalum, hafnium or niobium which is porous and constitutes the emitting surface.

48322. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to cylindrical cathode for magnetron. Cathode constituted by a molybdenum tube and a porous metal body such as of tungsten, molybdenum, hafnium, tantalum or niobium surrounding the said tube, between which is formed a supply chamber containing alkaline-earth metal compounds and molybdenum rings pressed on the ends of the molybdenum tube and connected with the porous metal body by a diffusion weld.

48323. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to X-Ray diagnostic apparatus comprising a radiograph intensifier. Eyepiece secured to periscope, which together with image amplifier constitutes a structural assembly and allows of lateral displacement of the point of observation but such that the direction of viewing remains in a plane at right angles to the image plane.

48324. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to cathodes for electric discharge tubes. Internally provided with compounds of alkaline-earth metals other than pure oxides and of a composition such that upon heating they only react with refracting metal such as tungsten, molybdenum, tantalum, hafnium, or niobium which forms the emitting surface, whilst forming free alkaline-earth metal.

48325. Standard Telephones and Cables Limited. Improvements in or relating to electric discharge tube circuits. (December 20, 1951.) Variable impedance cathode circuit for an electric

- discharge tube comprises two branches from the cathode, first branch including a resistance, the second branch including a rectifier.
48326. E. K. Cole Limited. Improvements in or relating to permeability tuning arrangements. In which the movement of cores of the coils is effected simultaneously by a single control knob and cores of sort wave coils are moved at a slower rate than those of medium and long waves.
48327. F. L. Smidth & Co. A/S. A method of grinding in a wet mill having a plurality of compartments, and a mill for carrying the method into effect. Dry matter and substantial part of the liquid are fed to the first compartment and the remaining quantity of water necessary to render the slurry of adequate viscosity is fed to the last compartment.
- OCTOBER 29.
48328. Void.
48329. Void.
48330. Milind Patents. Improvements in or relating to a "steering device for toys and the like". Comprising a steering wheel connected to a steering pivot of a fork by means of a control wire or cable, said fork being fitted with a wheel near the centre of the toy vehicle.
48331. Void.
48332. Void.
48333. G. Volland. A centrifugal pump. Nozzle or diffuser surrounding entire or part of periphery of impeller acting as injector pump extracting air.
48334. A. Kagalwala. An advertising or display device. Fluorescent materials kept within the field of high frequency waves.
48335. Casablancas High Draft Company Limited. Improvements in top rollers for spinning and preparatory machinery. (October 30, 1951.) The top roller being composed of a spindle or arbor arranged to carry a roller boss at each end and an intermediate sleeve, one of the bosses having an axial aperture into which the arbor end can freely rotate.
48336. The British United Shoe Machinery Company Limited. Improvements in or relating to machines for stacking flexible sheet material. Having means arranged variably to determine whether the delivery end of the conveyor shall move in the same or opposite direction of delivery of work pieces.
48337. North American Aviation. Inc. Improvements in or relating to control devices for airplanes. Wind lift characteristic changing means operated through feeler mounted on the aeroplane forwardly of the wing.
48338. W. K. Wasdell. Improvements relating to shock absorbers or vibration dampers. Chamber disposed at one end of cylinder for receiving damping medium and for location of flexible container filled with gas or air.
48339. Unilever Limited (formerly known as Lever Brothers & Unilever Limited). Improvements in the bleaching of soaps and soapstocks. (November 9, 1951.) Continuously feeding hypochlorite bleaching agent into stream of molten soap and ensuring rapid and intimate mixing.
48340. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of riboflavin-5'-monophosphoric acid ester. Reacting riboflavin with meta-phosphoric acid, hydrolysing the product obtained and separating riboflavin-5'-monophosphoric acid ester from the hydrolysed product.
48341. J. B. G. W. Govaars. Improvements in or relating to trailer vehicles. Adapted to transport stretchers, with a main part of the frame at the level of bumper of motor vehicle.
- OCTOBER 30.
48342. Council of Scientific and Industrial Research. A method for the regeneration of the spent liquid from electrolytic manganese and electrolytic manganese dioxide baths. The sulphuric acid present in the spent bath is reacted with an ignited mass obtained by igniting to completion pure manganous sulphate at about 750°C.
48343. Void.
48344. Aktiebolaget Bofors. Improvements in or relating to methods of preparing isonicotinic acid by oxidizing mixtures of pyridine homologues. A mixture of pyridine homologues is oxidised with nitric acid or a mixture of nitric acid and a nitrate at a temperature not less than 150°C and under superatmospheric pressure.

48345. United States Steel Corporation. Method of electrolytically cleaning ferrous sheet metal preparatory to electrolytic tinning. Subjecting ferrous sheet metal to electrolysis in dilute acid solution in successive stages first as cathode and then as anode whereby the metal when tinned electrolytically exhibits enhanced corrosion resistance.

48346. John McNeil & Company Limited. Improvements in or relating to mechanical screeners for raw sugar mill juice or other liquid carrying suspended matter. Comprises a pair of eccentrics mounted for rotation about spaced axes, a frame journaled on said eccentrics and screens carried by said frame.

48347. The Metal Box Company of India Limited. Improvements in or relating to sealing containers. There is provided a double bead on the container into the cavity of which the overseal is squeezed.

OCTOBER 31.

48348. Mrs. T. K. Karanjia. Improvements in or relating to devices for weighing letters small parcels and like articles. A measuring rule of the like is provided with clips cut out at its ends and holes on both sides of its centre of gravity, along the length of the scale, said holes being marked with different weighing units.

48349. Void.

48350. Purolator Products, Inc. Improvements in or relating to a replaceable filter element. Having pleated body of filtering material extending radially of its axis and end discs with bent over edges to define retaining rims for said pleats around a guide means.

48351. Standard Oil Development Company. Improvements in or relating to the refining of petroleum oils. [Addition to No. 47931.] Wherein the amount of the cracked products from the cracking stage fed to the fractionation zone and the amount of gas oil fed to the cracking zone are expressed by the equation $F = [(0.037) T - 30.1] C - 3.41T + 2793$.

48352. M. Ras. Ink-feeding device for printing press inkers. Control member is provided which conducts ink to rollers from pressure chamber which has a closing device to control the quantity of ink.

NOVEMBER 1.

48353. P. P. Sinha. Improvement in or relating to stringed instrument. A musical instrument having six bridges over which pass the main as well as the resounding strings.

48354. Parke, Davis & Company. Process for the production of nitrophenyl acylamido diol derivatives. [Divided out of No. 45319; anti-dated to 11th June, 1951.] Subjecting a nitrophenyl substituted cyclic compound to mild hydrolysis in a solvent with an acidic or alkaline hydrolytic agent.

48355. Parke, Davis & Company. Process for the production of nitrophenyl substituted cyclic compounds [Divided out of No. 45319; anti-dated to June 11, 1951.] Nitrating a phenyl substituted cyclic compound.

48356. Parke, Davis & Company. Process for the production of nitrophenyl amino diol derivatives, [Divided out of No. 45319; anti-dated to June 11, 1951]. Subjecting a nitrophenyl substituted cyclic compound to hydrolysis with a dilute mineral acid.

NOVEMBER 3.

48357. Void.

48358. Ruhrchemie Aktiengesellschaft. Process for the production of aldehyde mixtures and aldehydes free from metals and acetals. Crude aldehydes treated with water at temperatures of 100-250°C under pressure.

48359. Purolator Products, Inc. Improvements in or relating to self-supporting filtering units and method of preparation thereof. A filtering unit from a narrow metal ribbon having spaced projection on a face thereof.

48360. Polak & Schwarz (England) Limited. Improvements in the stabilization of soap solutions. (November 9, 1951.) A low pH soap solution, which is not sufficiently alkaline as usual, contains an additional substance comprising one or a mixture of the type: an alcohol, an aldehyde or a phenol.

48361. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to X-ray tubes comprising a liquidcooled anode. Where the cooling liquid is supplied through a spraying device to the surface to be cooled and a movable guide is provided between the anode

surface and the wall of the spraying device.

48362. Void.

48363. Farbwerke Hoechst vormals Meister Lucius & Brüning. Process of preparing azo-pigment. (December 20, 1951.) Carrying out coupling operation in presence of oil and emulsifying agent.

48364. Naphtol-Chemie Offenbach. Manufacture of anti-diazotates of aromatic amines containing basic substituents. (November 26, 1951.) Diazonium compound of the amine is treated with caustic alkali in the cold, hydrolysed and heated with a concentrated solution of a caustic alkali.

NOVEMBER 4.

48365. Void.

48366. "LICENCIA" Talalmanyokat Ertekessito Vallalat. Improvements relating to means for regulating the supply of fuel to internal combustion engines. Electrically controlled valve to regulate flow of fuel and an electric switch actuated by fuel lever.

48367. Farbenfabriken Bayer, Improved manufacture of a blue vat dyestuff. (November 14, 1951.) Melting 1-aminoanthraquinone with an alkali phenolate in the presence of an oxidation agent and an alkali metal salt of a lower fatty acid.

48368. Union Carbide and Carbon Corporation. Process and apparatus for continuous milling of plastic material. Milling between a rotating smooth surface and a stationary surface such surfaces providing a convergent zone terminating in a milling clearance.

48369. Hemphill Company. Improvements in method of knitting. Knitting on needle cylinders having the same diameter but provided with different number of needles co-operating with a corresponding number of sinkers.

48370. Void.

NOVEMBER 5.

48371. The Distillers Company Limited. Manufacture of hydrogen cyanide. (November 6, 1951.) By passing a gaseous mixture containing methanol, ammonia, and oxygen over a catalyst.

48372. Dunlop Rubber Company Limited. Improved disc brake for vehicles. Pressure plate with pads of friction material

located on each side of the rotatable disc, pivotally secured at one end and pressure operated mechanism on the other end.

48373. A. Nand. Internal combustion engines. Kerosene and water passed through a heating device and an additional carburettor for supply of the water.

NOVEMBER 6.

48374. Void.

48375. Void.

48376. Void.

48377. Void.

48378. Dunlop Rubber Company Limited. Improvements in or relating to pneumatic tyres. (November 7, 1951.) Comprising a pair of bead rings connected by a web being made from a thermoplastic material.

48379. Nordisk Insulinlaboratorium. Means for blood grouping. Consisting a sheet of material, having a smooth chemically indifferent surface area having a series of separate part areas each carrying a layer of dry test serum diluted with conglutinin.

48380. United States Steel Corporation. Sheet pin hole detector. Of the type having a source of light, a first photo-sensitive device for detecting pin holes, a deflecting element operated by said photo-sensitive device and a second photo-sensitive device adjacent said first photo-sensitive device.

48381. E. Kiefer. Improvements relating to apparatus for the cooling, in some cases for the selective cooling or heating, of gases. Comprising evaporation surfaces disposed in a passage through which gases pass and impregnated with an evaporation liquid.

48382. N. V. Philips' Gloeilampenfabrieken. Improvements in or rotary electric machines of low power. [Addition to No. 45252]. Having a magnetic circuit including two relatively rotatable parts arranged side by side in the axial direction, one of which is constituted by a multipolar permanent magnet.

48383. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to construction elements for contact banks used in automatic telephone systems or the like. Consisting of a insulating plate accommodating contact members laterally projecting from the plate and

said plate further including a number of multiple wires extending parallel to the plane of the plate and at right angles to the contact members.

48384. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of securing galvanoplastic metal skins and matrices manufactured by such methods. Side of the metal skin remote from the cavity is provided with a removable layer of material, the resultant body is used as a model for making a mould wherein after taking out said body metal is poured, body thus cast is removed and a second metal block of this body is prepared, said resultant body after separating said layer is secured to the second block by cementation.

NOVEMBER 7.

48385. Council of Scientific and Industrial Research. New method of preparation of active carbon from coals and lignites. Introducing steam during carbonisation followed by air activation.

48386. Void.

48387. Jagat Ram. Electric lighter. Consisting of a coil of heater wire through which is passed a secondary current of low voltage transformed from house mains through transformer or induction coil.

48388. L. S. Nagarkar. A roller for rolling dough and the like. Characterised in that roller is adapted to rotate independently of handles.

48389. P. K. D. Merchant. Mounting of electrical motors. The motor being mounted on a sliding plate which slides over a fixed plate, connecting bolts in the sliding plate engaging slots in the fixed plate.

48390. Void.

48391. Machinery Manufacturers Corporation Limited. Improvements in or relating to carding engines. [Addition to No. 47064.] Engine stopped by closure of contacts caused by upwards movement of tube gear when sliver can is filled to its capacity.

48392. B. A. Tarkar. Wick regulating device for stoves and lamps. Comprising a wick carrier with a pin to engage a spiral slot in a guide tube and an operative sleeve around the guide tube.

48393. Ranney Method Water Supplies, Inc. Apparatus and method for the collection of water. The caisson having perforated screen pipe with longitudinally adjustable discharge pipes inside the screen pipe.

48394. The Distillers Company Limited. Organic nitriles. (November 8, 1951.) Removing unreacted aldehyde and hydrogen cyanide with some reagent.

48395. Glaxo Laboratories Limited. Improvements in or relating to the preparation of new steroid substances. (November 15, 1951.) Void after publication. 5-dihydroergo steryl ester is hydrogenated and the tetrahalogen compound is partially dehalogenated to give 22, 23-dihalogeno-steroid.

48396. Dansk Industri Syndikat, Compagnie Madsen, A/S. Machine gun. Striking bolt when advanced passages in locking device affixed there to allow locking pawls to be carried outwardly through them locking breech bolt; when striking bolt is withdrawn pawls are withdrawn and encased in locking device.

48397. Dansk Industri Syndikat, Compagnie Madsen, A/S. Regulating mechanism to control the feeding of cartridges in belt-fed machine guns. Cartridge feed members pivoted on hinged lid on the receiver and curved bar operating feed members pivoted on fixed part of receiver.

48398. British Timken Limited. Improvements relating to roller bearings and to the cages thereof. (February 7, 1952.) Separate roller retaining members fitted in or to the lands between pockets so as to overhang and extend to retain the rollers.

48399. Beyer, Peacock & Company Limited, and J. Hadfield. Improvements in or relating to steam locomotives and particularly to articulated steam locomotives. (March 7, 1952.) Alternative conduits of engine cylinders leading to blast pipe of boiler unit and to point of connection to steam input side of condensing track vehicle coupled to engine unit and valves for controlling steam flow to either.

48400. National Research Development Corporation. Apparatus for the administration of analgesics and anaesthetics. (November 13, 1951.) Comprising container for analgesic an open-ended tube,

a duct for delivering analgesic from container to tube and means located within the tube for accelerating the rate of flow therein.

48401. Macleans Limited. Improvements in or relating to collapsible tubes. (November 9, 1951.) Providing the collapsible tube with a threaded or ribbed metal nozzle and a collar made of thermoplastic material surrounding said nozzle.

48402. Pilkington Brothers Limited. Improvements in or relating to apparatus for forming cavities in the wall of a socket of a pin-type glass insulator. (November 20, 1951.) Characterised by a pair of tong members the lower ends of which are formed with swellings on the outside to produce the desired cavities.

48403. Sir Evan Owen Williams. Improvements in and relating to the construction of large span roofs. (November 9, 1951.) Void after publication. Suspended reinforced concrete shell of inverted arch cross section.

48404. Void.

NOVEMBER 8.

48405. K. E. Bharucha, Dr. J. G. Kane and Dr. D. Rebello. Recovery of nickel from spent nickel catalyst. Digesting spent catalyst with formic or acetic acid.

48406. The Visking Corporation. Method of and apparatus for producing plastic film. Continuously passing inflated seamless tubing in formative plastic state through a stream of gaseous cooling medium blown through an annular outlet encircling the tubing and rotating about the centre axis of and spaced from the tubing passing therethrough.

48407. The Firestone Tire & Rubber Company. Improvements in or relating to tire bead ledge construction. A molding ring comprising a rigid annular radially inner portion and a flexible annular, radially outer portion.

NOVEMBER 11.

48408. Ciba Limited. Process for the manufacture of new aminobenzene sulfonamides. A compound of the formula $p\text{-R-C}_6\text{H}_4\text{-SO}_2\text{-X}$; X and R standing for halogen and aminogroup respectively, is reacted with a substituted halogenated pyridazine and if desired the resulting product is converted into its salts.

48409. R. F. Warry Limited. Improvements in hoists. (November 13, 1951.) Of the type comprising a vertical column with a base frame adapted to be rested on the ground when the column is upright, said column being tiltable about a number of fulcrum integers.

48410. Dr. Ing. Ernst Breuning. Improvements in the supervision and control of textile manufacturing processes. Electric current running through the electrodes and the textile material to be processed is only produced when the latter leaves its pre-determined path or transgresses the pre-determined limits in space.

48411. R. J. E. Buckingham. Improvements in or relating to agricultural implements. Comprises a hoe carried on the lower end of a supporting arm slidably mounted upon a frame, spring means acting laterally upon said arm to tilt the arm and a crank for actuating said arm wherein the hoe swings down and up in the reverse direction and in an arcuate movement through the ground.

48412. Hemphill Company. Improvements in yarn lever controlling mechanism for circular independent needle, knitting machines. A first means for controlling a yarn lever including a rotatable drum, a second means including a rocker and connecting means between the said two means.

48413. E. A. H. Friedheim. Process for preparing organic dithiol derivatives. Reacting metal compound with a 2, 3-dimercaptosuccinic acid compound.

48414. Buffalo Electro-Chemical Company, Inc. Manufacture of hydrogen peroxide. Carrying reduction and auto-oxidation of alkylated anthraquinones and their derivatives dissolved in a solvent mixture containing a diphenyl hydrocarbon which has 12 to 18 carbon atoms and which is saturated with the exception of the phenyl nuclei.

48415. Imperial Chemical Industries Limited. Improvements in or relating to coating compositions. [Addition to No. 45596.] [Divided out of No. 45596; antedated to July 31, 1951.] Containing substantially non-oxidised magnetic metal powder having a ratio of real density to apparent density greater than 4:1.

48416. Aladdin Industries Limited. Improvements in or relating to incandescent mantle fittings. (November 26, 1951.) Metal ring with vertical annular inner portion to fit in inner edge of burner cone for locating centrally; mantle supported on periphery of the ring.

48417. A. Coyne and J. Bellier. Improvements in methods and devices for protecting reinforcing prestressed cables. Wires of the cable are spread out at one end in the neighbourhood of its anchorage and injecting protective material under pressure.

NOVEMBER 12.

48418. Void.

48419. Council of Scientific and Industrial Research. Enamels for wire wound resistors. Comprising 15 to 22 per cent alkali, 10 to 25 per cent boric oxide, 40 to 60 per cent refractory oxide, 0 to 12 per cent colourants and 0 to 6 per cent flourine.

48420. Void.

48421. Skf Kugellagerfabriken Gesellschaft Mit Beschränkter Haftung. Double apron drawing frames. Top cradle serving as guide for the top apron which may be swivelled bears against the axle of the top rollers operating in conjunction with it and rests on a portion of drawing frame.

48422. Skf Kugellagerfabriken Gesellschaft Mit Beschränkter Haftung. Double apron drawing frames. Top cradle serving for tensioning and guiding the top apron and resting against the axle of the respective pair of top rollers and also a power accumulator acting upon the front loop guiding means for the top apron.

48423. Tecalemit Limited. An improved nipple or lubricant-receiving device. (September 15, 1952.) Non return valve formed at the upper end of the pin which is movably held by means of a spring in the bore.

48424. Titan Company Inc. Preparation of lower titanium chlorides. In electrolytic cell having titanium anode, cathode and molten electrolyte of halide salts of alkali, alkaline earth metal or magnesium.

48425. Dunlop Rubber Company Limited. Disc brake for vehicles. Axially aligned members located on both sides of the

disc and a fluid pressure operated mechanism move one of the members axially relative to the disc.

48426. Void.

48427. Sudhir Sen. Improvements in and relating to the pyro-metallurgical separation of iron and manganese from ores, concentrates and like materials. Under acid conditions and a temperature range between 900° and 1400°C with CaO/SiO₂ ratio below 0.3, the slag is controlled to viscous stage by adjusting MnO/SiO₂ ratio to 2 and more.

48428. H. D. Hudson Manufacturing Company. Spraying device. Including a tank having an enlarged upper end provided with an access opening for a spraying solution said opening having the cylinder of a pump removably mounted therein.

NOVEMBER 13.

48429. The Director, Indian Agricultural Research Institute (Pusa), New Delhi. Improvements in or relating to preparation of terpenyl ethers and alcohols from turpentine oil. Reacting terpenes with mixture of 20-60 percent alcohol, 15-35 per cent of acid catalyst in water at 30-75°C with agitation

48430. Void.

48431. G. W. Rossiter. Improvements relating to display and amusement devices. Partially detached parts on a sheet material with thread attachment points spaced in pre-determined relation.

48432. The Distillers Company Limited. Manufacture of hydrogen cyanide (November 14, 1951.) A gaseous mixture of ammonia, formaldehyde and free oxygen, the molar ratios of (a) ammonia to formaldehyde and (b) oxygen to formaldehyde being greater than 1, is passed at 340-450°C over a catalyst comprising molybdenum oxide.

48433. Georg Fischer Aktiengesellschaft. Container for a centrifuging arrangement for removing the surplus zinc from metal components coming from a dipping bath. Container accommodating the metal components provided with device to hold them in the position in which they are charged into the container.

48434. American Cyanamid Company. Improvements relating to the preparation of Δ pregnenes. (February 18, 1952.) By reacting Δ^5 -pregnene-11 β , 17 α , 21 triol. 3, 20-dione diethylene ketal

with water in the presence of a solvent and a mineral acid.

48435. C. P. Mehta. Improvements in and relating to loom shuttles. Threading attachment comprising a base part and an up-turned folded-back part, the base part being slidably held in an undercut slot in the shuttle, the up-turned part entering an extension of the cop space.

48436. W. C. P. Smout. Process and apparatus for the production of mineral and slag wool. (May 16, 1952.) Causing an atomizing medium to act on both sides of a vertically descending stream of slag at right angles to the direction of flow thereof.

NOVEMBER 14.

48437. The General Electric Company Limited. Improvements in or relating to electric cooking apparatus. (November 15, 1951.) Container for material to be cooked within heat conserving outer casing, and steam generator and cold water feed tank arranged adjacent beneath container and connected to steam space in the casing; tank apertured above water level to equalise pressures in generator and tank.

48438. Void.

48439. Ranjit Chandra Sen. Improvements in or relating to locking device for doors and particularly to doors of railway coaches. Electromagnet with winding divided in two parts, soft iron cores are so spaced on sliding bolt that only one core is in the middle of its winding part, at a time.

48440. Void.

48441. Hyderabad Allwyn Metal Works, Limited. Improvements in or relating to chairs. In which the seat is slidably mounted and is so supported that the inclination of the seat varies during its forward and receding movement, the inclination of the back rest also being adapted to change correspondingly.

NOVEMBER 15.

48442. D. E. Crooker. Method of and apparatus for the manufacture of non-skid tire treads. Having a mold member with circumferential design forming ribs, supporting and centering means for a wire oil skid.

48443. Void.

48444. K. K. Shah. Adjustable brush-handle. Comprising semi-circular plate having three slots affixed to brush foundation, a cylindrical tube carrying handle adjusted in central slot with a strip with means of adjustment at desired angles.

48445. The General Electric Company Limited. Improvements in or relating to arrangements comprising liquid resistances and to alternating current electric motors equipment including such resistances. (November 16, 1951.) Comprises a wound rotor induction motor and a liquid resistance the effective area being controlled by means responsive to a control signal.

48446. Coal Industry (Patents) Limited. Improvements in scrapper, dirt or slusher buckets. (November 16, 1951.) Comprising two longitudinal side walls provided with upswaft lower edges, a scoop member located towards rear end and extending between said walls and upwardly and rearwardly and means located rear front and rear ends for attachment to ropes.

NOVEMBER 17.

48447. Void.

48448. Automatic Telephone and Electric Company Limited. Improvements in carrier current transmission systems (December 1, 1951.) Comprises a pilot signal, a potential divider with a tapping point and an amplifier.

48449. Standard Oil Development Company. Improvements in or relating to synthetic rubber compositions and methods for making the same. Mixing oxy-carbon black with a low unsaturated solid olefin-multiolefin synthetic rubbery co-polymer and heating the mixture.

48450. The Motherwell Bridge & Engineering Company Limited, and R. H. Foster. Improvements in or relating to roofs for storage tanks or similar structures. Comprising a peripheral curb, a plurality of radially disposed ribs, a centrally disposed crown member and roof sheeting supported upon the arches formed by the ribs.

48451. Hindustan Metal Industries. Mould box for casting buckets and the like containers. Comprising four rings of supports, first for the core, the second for the body pattern, the third for enclosing the pattern for the base stand and the fourth below the third ring.

48452. G. M. Garde. Manufacture of sulphuric acid and sodium chloride from aqueous solutions of sodium sulphate and sodium bi-sulphate. Reacting dry hydrogen chloride gas under pressure and at a temperature above 32°C with aqueous solution of sodium sulphate and/or bisulphate.

NOVEMBER 18.

48453. The English Electric Company Limited. Improvements in and relating to control systems for dynamo electric machines. (November, 30, 1951.) Means arranged to inject voltage into the motor circuit in series relationship which automatically varies with variation of armature current.

48454. Gaumont-Kalee Seating Limited. Improvements in and relating to chairs or seats. Having a pair of side standards constructed of base and upper part held by bolts and supporting a seat and back.

48455. Kanegafuchi Boseki Kabushiki Kaisha (Kanegafuchi Spinning Co. Ltd.). A process of non-stop automatic lap winding in a scutcher. Supplying taper lap rollers, ascending and descending of anti-friction rack, marking of cutting line of fixed length of tapered cutting off of lap, winding of cut end of lap upon a taper lap roller and discharging of lap wherein a fixed length has been wound up.

48456. The Carborundum Company Limited. Metal-ceramic bonded granular material. Comprising non-metallic grains held in a metal ceramic bond from a metal and glass forming or vitreous ceramic material.

48457. Void.

48458. Ciba Limited. Process for the manufacture of 14-hydroxy steroids. C-19, 5, 6-dihalogen androstanes containing in 3-position and acyloxy group and in 17-position a free or oxygenous functionally converted oxo group or an acyloxy group are treated with oxidising agents containing hexavalent chromium and the resultant 14-hydroxy compounds are dehalogenated.

NOVEMBER 19.

48459. Void.

48460. K. Pendar. A process for direct extraction of a metal from its sulphide. (fusing the metal sulphide with an alkali

metal sulphide or carbonate and a metallic oxide with an alkali metal carbonate in presence of carbon.

NOVEMBER 20.

48461. Void.

48462. Texaco Development Corporation. Improvements in or relating to lubricating oil. [Divided out of No. 45272; ante-dated to May 31, 1951.] Lubricating oil including a little liquid silicone has added thereto barium sulphonate, barium dithiophosphate and sulphurized terpene product.

48463. The British Thomson-Houston Company Limited. Improvements in control of ward leonard systems. (November 28, 1951.) Comprising means responsive to the input to or output from the ward-leonard combination and an excitation system including a field winding controlled from said means for controlling the generator voltage of said combination whereby the rate of acceleration and therefore demand on the supply is reduced when demand exceeds a predetermined value.

48464. The British Thomson-Houston Company Limited. Improvements in and relating to an electrically operated hydraulic pressure device or thrusor. (January 18, 1952.) With means for bypassing a portion of the liquid circulated by the impeller from the pressure side of the piston and a valve for controlling the amount of liquid bypassed.

48456. H. Oetiker. Circular clip for hose pipe couplings. (December 13, 1951.) Closed metal ring having two folds forming open bulges, the sides of bulges being parallel.

NOVEMBER 21.

48466. J. R. Seville, and Spooner Food Machinery Engineering Company Limited. Improvements relating to gas burners for furnaces and the like. Comprising two burner tubes whose flames impinge and produce a single flame and an electrical circuit including burner tubes which is closed by the flames when they merge and bridge across the two tubes.

48467. United States Steel Corporation. Apparatus for inspecting and classifying flat steel products. Comprising steps of testing the product in strip form for pin holes, applying a mark adjacent the pin

hole, shearing the strip into sheets and classifying the sheets into prime and rejects.

48468. Durand and Huguenin A.-G. Process for the manufacture of sulphuric acid ester salts of leuco vat dyestuffs of the anthraquinone series. (Addition to No. 44816.) Instead of or in addition to diethyle-cyclohexyl-amine, at least one diethyl-(monomethyl-cyclohexyl)-amine is used.

48469. Ciba Limited. Manufacture of C-19 Δ^{14-15} -androstenes. A dehydrating agent is caused to act on a C-19 14-hydroxy-androstene.

48470. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of separating gas mixtures, more particularly air, into fractions of different volatility. Gas mixture at atmospheric pressure is supplied to gas fractionating column, at least part of the mixture being cooled in a heat exchanger in contact with the liquid fraction having the highest boiling point, the cooled gas being supplied to the column at a point between its ends, the gas is subsequently separated and heat energy is withdrawn at the upper end of the column by a cold gas refrigerating apparatus.

48471. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric discharge tubes. Having conductive layer inside the lamp connected to an activated electrode by a metal tape whose end connected to the conductive layer has at least two adjacent portions owing to splitting in the direction of length, one portion being in contact with the conductive layer.

48472. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to luminescent screens and electric discharge tubes containing them. Containing a fired reaction product of zinc, phosphorus, silicon, oxygen and manganese as the activator, the molecular ratio of zinc oxide and silicon dioxide lies between 2.2:1 and 1:1, that of manganese oxide and zinc oxide between 1:200 and 1:5, that of phosphorus pentoxide and zinc oxide between 1:400 and 1:10.

48473. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of separating gas-mixture in a rectifying column. Provided with an auxiliary medium compressed in a compressor at a temperature lower than

0°C, whereafter the medium gives off caloric energy in the vaporiser of the rectifying column, and after being decreased in pressure absorbs caloric energy in the condenser of the rectifying column, whereupon the medium flows back to the compressor, caloric energy being distracted from the rectifying column by cold gas refrigerator.

48474. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a method of manufacturing regenerators for use in hot-gas reciprocating engine. Comprising a housing and a filling therein, the filling being embedded locally in a wall of the housing during the manufacture of at least one wall of the housing.

48475. Void.

48476. M. A. Chaudary. Improvements in or relating to ring spinning and winding systems. Yarn is passed to the bobbin through a revolving ring which is positively driven by an independent drive.

NOVEMBER 24.

48477. Mousell & Co. Ltd. Percussion apparatus. A striking rod is provided in a guide tube and a tool is attached to the lower end of the guide tube and the whole device is used for giving percussion.

48478. Dunlop Rubber Company Limited. Reinforced flexible tubing. (December 1, 1951.) A flexible tubular member associated with a coaxial helix of unplasticized polyvinyl compound.

48479. Dunlop Rubber Company Limited. Bonding rubber to metal. Forming on the surface an adherent film of oxide, applying to the film a heat vulcanisable rubber with a layer of organic polyisocyanate.

48480. British Telecommunications Research Limited. Improvements in and relating to modulators for electric oscillations. (November 27, 1951.) [Addition to No. 45148.] Comprising a balanced modulator of the rectifier type comprising two reactance elements of opposite sign connected such that the modulator is unbalanced at carrier frequency and in addition to two side bands, provides an oscillation at carrier frequency in phase quadrature with the resultant of two side-bands and independent of modulating voltage applied to the modulator.

48481. Void.

48482. D. H. M. Davidson and N. G. Randall. A new or improved machine for removing tyres from wheels. Comprising means for supporting the wheel, means for elevating the supporting means with the wheel and abutment means.

48483. Premo Pharmaceutical Laboratories, Inc. Drain-clear container for aqueous-vehicle liquid pharmaceutical preparations. The container is provided on its internal surface with a thin transparent film of a silicone and a silicone antifoam agent.

48484. Vereinigte Oesterreichische Eisen-Und-Stahlwerke Aktiengesellschaft. A process for making a low oxygen steel. Oxygen is blown on molten pig iron having about 4 per cent. C, below 1.2 per cent. Si, 1-3 per cent. Mn and regular circulation of the melt is produced by the formation of carbon.

48485. Vereinigte Oesterreichische Eisen-Und Stahlwerke Aktiengesellschaft. A process for making rolled steel highly unsusceptible to cold-working and to welding influences. Molten iron refined by blowing oxygen on molten iron is teamed without being killed, rolled and cooled from 700° C at a rate less than 150°C/Min.

48486. Vereinigte Oesterreichische Eisen-Und Stahlwerke Aktiengesellschaft. A process for the production of technically pure iron. In refining Pig iron with oxygen blown into or on the melt, the temperature of the slag is kept below that of the melt by adding cold fluxes.

48487. Vereinigte Oesterreichische Eisen-Und Stahlwerke Aktiengesellschaft. A nozzle for oxygen jet used in refining liquid ferrous and non-ferrous alloys. Nozzle tip situated in the range under cooled by expanding gas is solid and cooling ducts extend as far as that part of the nozzle on which expanding gases have no cooling effect.

48488. Batfast Industrial Works. Improvements in or relating to lamps and lanterns and parts thereof. [Divisional date, May 9, 1952.] Chimney being held in position by being screwed on to a chimney holding piece.

48489. British Telecommunications Research Limited. Improvements in electrical switching arrangements suitable

for use in signalling systems. (November 28, 1951.) Two rectifiers are connected in series in opposite senses across the lines and the junction point of the rectifiers connected to grid of a thermionic valve.

48490. British Telecommunications Research Limited. Improvements in and relating to electrical switching arrangements suitable for use in signalling system. (December 17, 1951.) Includes a control unit to respond to signals in each direction having a thermionic toggle device.

48491. I. V. Dawson. Improvements in or relating to heat exchangers particularly for dairy-farm apparatus. Comprising closed outer casing, unitary arrangement of pipe convolutions, coaxially arranged one above another and means for directing flow of liquid evenly over the convolutions.

48492. Standard Telephones and Cables Limited. Improvements in and relating to voice frequency signal receivers. (January 30, 1952.) Comprises a thermionic valve amplifier, a guard circuit and a rectifying arrangement.

48493. Ciba Limited. Oxidatively drying preparations and products made therefrom. Comprising polyallyl ether of aminotriazine-formaldehyde condensation product and metallic drier.

NOVEMBER 25.

48494. Inventa A. G. Fur Forschung und Patentverwertung. Improvements relating to the manufacture of oximes. A primary amine is treated with H_2O_2 in the presence of a salt of an acid of tungsten, molybdenum or uranium as catalyst.

48495. G. T. Church. Improvements in or relating to incubators. (December 14, 1951.) Comprising a casing having a cover, inner walls within the casing, a heating device between the casing and the inner walls, an egg tray within said inner walls, air inlet at the base of the casing and humidifying means disposed over the inlet.

48496 W. K. Wasdell. A plant or installation for obtaining and storing energy from the wind. (December 7, 1951.) Wind driven direct current generators adopted to face the wind always and supplying current to batteries of voltmeter or electrolytic cells for decomposing water.

48497. Hemphill Company. Improvements in or relating to circular independent needle knitting machine. Providing a third yarn changing device acting directly upon the second yarn changing device to vary operation thereof at predetermined times.

48498. S. Takakita, S. Takakita, M. Takakita, T. Takakita and A. Takakita Breast of plough. Comprising a number of elongated metallic strips combined universally and severally in parallel relation, and regulating means adapted to adjust the angle of recline of the breast as a whole and to twist the surface of the breast.

NOVEMBER 26.

48499. Council of Scientific and Industrial Research. An improved method for the production of manganese salts from manganese ores, and its application for the regeneration of the spent electrolytic manganese sulphate baths. Digesting manganese ore with dilute mineral acid and an organic reducing agent.

48500. Void.

48501. The British Iron & Steel Research Association. Improvements in or relating to the measurement of the thickness of sheet or strip material. (November 27, 1951.) Measurement of strip thickness being derived from a measurement of the initial roll setting and of the force tending to separate the rolls.

48502. Naamlooze Vennootschap VALEVEFA. Bodies for metal drums and method of an apparatus for making said metal bodies and drums. Comprising two practically flat side portions disposed in parallel relationship and connected by two portions bent with small radius of curvature.

48503. Bristol Laboratories Inc. Antibiotic material and its production. Amphomycin is produced by cultivating a strain of *Streptomyces* BL-456786 in an aqueous, nutrient containing, carbohydrate solution under submerged aerobic conditions until substantial antibacterial activity is imparted to the solution, and recovering the antibiotic from the broth.

NOVEMBER 27.

48504. Debaki Ranjan Dutt. Improved multipleway electrical plug socket. Having a housing accommodating two

multiple connecting contact pieces connected to the wires from the switch board, the housing having a detachable cover.

48505. Mousel & Co. Ltd. Manually powered tool for earth hole boring. The earth boring tool is made of two parts of which one is detachable and a cutting edge is provided at the lower end of the two parts.

48506. The General Electric Company Limited. Improvements in or relating to pulse widening apparatus. Including a transformer having one primary and two secondary windings, are input circuit, a capacitance and a resistance each connected in parallel with the primary winding, a source of two reference potentials and a further a capacitance from which output pulse train is derived.

48507. American Cyanamid Company. Improvements relating to the stabilizing of the crimp of acrylonitrile polymerization products. (September 6, 1950.) [Divided out of No. 45340; ante-dated to June 13, 1951.] Contacting the fibre with a fluid medium comprising water at a temperature between 100° to 150°C.

48508. American Cyanamid Company. Improvements relating to preparation of new distemper vaccine. (March 10, 1952.) Inoculating incubating chick eggs with live virulent distemper virus of dogs, further inoculating eggs with embryonic tissue suspension till virus is adapted to grow therein.

NOVEMBER 28.

48509. Automatic Telephone & Electric Company Limited. Improvements in telecommunication systems. (December 14, 1951.) Plurality of link circuits in common to all subscriber's lines each line having a plurality of sets of gas discharge tubes.

48510. Lamson Paragon Supply Company Limited. Improvements in and relating to feeding means for sheets or webs used in tabulating, typewriting and like writing or recording machines. (November 28, 1951.) Record webs are adapted to be fed around the platen roller of the tabulator.

48511. N. V. De Bataafsche Petroleum Maatschappij. Process for separating one or more solid substances from a mixture thereof with oil. Wherein the surface-active substance used contains

one or more organic phosphorous compounds.

48512. Maatschappij voor Kolenbewerking Stamicarbon N.V. Process for effecting double conversions between solutions of ionogenic substances with the aid of an ion exchanger. Combining a number of columns into a group, supplying washing water to one end of the group and drawing off concentrated solution from the other end, whereby the washing solutions obtained are sufficiently concentrated for use in loading or regenerating operations.

48513. The Electric Storage Battery Company. Improvements in electric storage batteries. Grid of lead-antimony-arsenic-silver alloy having antimony from 4% to 8% arsenic between 0.15% to 1%, silver between 0.04% to 0.6% and lead the remainder.

48514. Pinchin, Johnson and Associates Limited. Improvements in and relating to insulated metal wire and coating compositions for use in the production thereof. (November 30, 1951.) Passing the wire through a varnish containing an epoxide resin having more than one epoxy group, a mixed curing agent consisting of an alkylated amino resin and polybasic acid, an alkyd type resin and a solvent.

48515. Batfast Industrial Works. Improvements in or relating to hurricane lanterns. Comprising a base part and a body part tiltably mounted on the base part.

NOVEMBER 29.

48516. The General Electric Company Limited. Improvements in or relating to electroluminescent devices. (November 30, 1951.) Space between two conducting plates filled with luminescent and insulating materials, the former confined to part of thickness of their layer adjacent to one plate.

48517. J. M. S. Casanovas. Improvements in drawing mechanisms with endless belts, for textile fibres. Covering the cross piece of the cradle that guides the endless belts with a piece of leather or other material and moulding the covering material in such a way that the front part facing the delivery rollers is curved and rounded.

48518. Lightning Fasteners Limited. Improvements in or relating to machines

for making and attaching top stops to sliding clasp fasteners. (December 4, 1951.) Forming a U-shaped element about an anvil from a length of wire transferring and clamping said element on to a stringer tape.

48519. Gaumont-Kalee Seating Limited. Improvements in and relating to chairs with tip-up seats. (December 12, 1951.) Comprising a pair of side standards supporting a back, each standard having vertical row of adjustment holes into which a hinge pin is fixed.

48520. Director, Indian Institute of Science, Bangalore 3. Improvements in and relating to two-stroke compression-ignition engines. Two pistons in side-by-side cylinders having common combustion chambers and so connected to crank shaft that one piston leads the other, and controls exhaust ports, the other piston controlling inlet ports, means to set up air movements and means to supply inlet air and cooling air or other medium.

48521. Void.

48522. Void.

DECEMBER 1.

48523. National Research Development Corporation. Manufacture of β -alkoxy- α -aryl- $\alpha\beta$ -unsaturated nitriles. (December 6, 1951.) α -Acyl- γ -arylacetonitriles or their enolic forms are reacted with primary or secondary alcohol having not more than twelve carbon atoms under water removing conditions in the presence of a catalyst and an organic solvent.

48524. Hemphill Company. Improvements in method of knitting. The wale across which the second yarn is floated and in which the first yarn is knitted is offset by at least one wale from the corresponding wale of the preceding course.

48525. Aktiebolaget Separator. A method of soap-making. By neutralising wholly or in part the alkali hydroxide content of the neat soap with bi-or-polyvalent acids and/or acid alkali salts thereof.

48526. Dunlop Rubber Company Limited. Improvements in the manufacture of tennis and like inflated balls. (December 8, 1951.) By applying a layer of

feltable fibres to an inflated core carrying a surface layer of substantial thickness of a material removable in fluid form during felting.

8527. Levitation Limited. Improvements in or relating to buffers for railway, tramway and like vehicles. Liquid displaced through controlled orifice compresses air providing a restoring force to return buffer to its extended position.

DECEMBER 2.

8528. Alembic Glass Industries Ltd. Improvements in or relating to closing device for bottles and the like. Comprising a bush type circumferentially expandable cap provided with a rubber or plastic band.

8529. Council of Scientific and Industrial Research. A process for the thermal degradation of the seed oil of nim (*Melia Azadirachta*, *Melia Indica*). Divided out of No. 46713; ante-dated to February 13, 1952. Thermal degradation of the oil by fractional distillation of the oil below 300°C.

8530. Council of Scientific and Industrial Research. Improvements in or relating to utilization and refining of the seed oil of nim (*Melia Azadirachta*, *Melia Indica*). Divided out of No. 46713; ante-dated to February 13, 1952. Refining the oil by steam distillation or alcohol vapour treatment, after solvent extraction.

8531. R. A. Edmonds. An improved oil ghanni or oil mill or grinding mill operated by weight of animal. Mortar has a circular non-rotating platform, the structure oscillating about a ball and socket joint and a crusher is hinged to a central shaft, which shaft is rotated by a bullock walking on the platform.

8532. Alan Muntz & Company Limited. Improvements in or relating to internal-combustion-operated air-compressors. (December 10, 1951.) Extreme end portion of piston rod held up against piston crown by screw-threaded tension studs interconnecting open end piston skirt and two radial projections carried by piston rod.

8533. Deutsche Gold-Und Silber-Scheideanstalt, vormals Roessler. Improvements in or relating to sliding clasp fasteners. Each fastener member comprising at least one guide strip and at least one strip with teeth undercut on

those flanks disposed in the direction of travel of the clasp, the guide strip and/or the teeth being undercut on those flanks which are parallel to the direction of travel of the sliding clasp.

48534. Ciba Limited. Manufacture of new metallizable monoazodyestuffs and complex metal compounds thereof. A diazo compound of the formula $R-SO_2-R_1$ (OH)-NH₂ is coupled with a component free from sulphonic acid and carboxylic acid groups and capable of coupling in a position vicinal to hydroxyl group.

48535. Ciba Limited. Process for the manufacture of oxides of the steroidring. Treating 11-halogen-12-oxo-steroids with hydrides of amphoteric metals.

48536. Standard Telephones and Cables Limited. Electrical insulating material and method of making same. Comprising polyethylene . . . 70 to 95.25% and submicroscopic silica 4.75 to 30%.

48537. Standard Telephones and Cables Limited. Improvements in or relating to joints in insulated conductors. (January 23, 1952.) Comprising placing two pairs in overlapping relation, exposing the end of one conductor of each pair, anchoring insulation surrounding each of said conductors, anchoring the insulation the unexposed conductors, exposing the end of unexposed conductors, twisting together the conductors to be joined, bending conductor tails to lie parallel to the pairs and covering the twisted tails with insulation.

48538. Organon Laboratories Limited. A new and improved cyclopentanopolyhydrophenanthrene derivative and methods for its production. (January 21, 1952.) A cyclopentanopolyhydrophenanthrene having a free hydroxyl group is reacted with a derivative of β -phenyl propionic acid.

48539. Davy and United Engineering Company Limited. Improvements in or relating to apparatus responsive to the presence or absence of fluid at a predetermined point, such as liquid level detectors. (December 3, 1951.) Electromagnetic beam directed into the fluid so that it emerges from the fluid in a direction depending upon the refractive index of the fluid and received by a responding device when it emerges in a predetermined direction.

48540. Allied Ironfounders Limited. Improvements in or relating to moulds or

dies for casting of ferrous or non-ferrous metals. Moulds made by machining one or more blocks of carbon D.

48541. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to permanent magnets. The magnet is constituted by magnetic anisotropic body of ferromagnetic material of non-cubic crystals of polyoxides of iron and one of the metals Ba, Sr and Pb an atomic fraction 0.4 at most of the quantity of Ba, Sr or Pb being alternatively replaced by Ca.

48542. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to automatically variable gearing devices. Relative displacement of the auxiliary member and the outlet disengages the operating driving clutch and actuates the another driving clutch.

DECEMBER 3.

48543. The Hindustan Construction Co., Ltd. Process and apparatus for the construction of concrete piles cast-in-situ. Concrete charged into pile pipe vibrated by one or more immersion vibrators located close to lower end of pile pipe.

48544. The Hindustan Construction Co. Ltd. Process and apparatus for the construction of concrete piles cast-in-situ with enlargement at the bottom of the pile shaft. Concrete tamped directly by driving pipe provided with a flap at the bottom.

48545. The Hindustan Construction Co. Ltd. Process and apparatus for the construction of concrete sheet piling cast-in-situ. At least one pipe kept in position and charged with concrete, which guides next pipe driven in position; concrete as it flows out of the pipe vibrated by immersion vibrators.

48546. E. V. Wagner. Improvements in fountain pens. (February 1, 1952.) Having the combination of a nose surrounding the nib and feed bar and slotted for protrusion of the tip of the nib and feed bar.

8547. Hindustan Metal Industries. Manufacture of metal utensils. Cast thal is reduced in thickness by a bit of a tool in a lathe and turned in a device for holding utensils.

48548. N. R. Jha. Improvements in or relating to padlocks. Employing a

tumbler operated by a key for engaging a shackle, said tumbler in locked position being adapted to engage one or more lugs in the wall of the lock opposite to the wall in which the tumbler is seated.

48549. P. V. Dijk. Improvements in and relating to a means for separating cashew nut shells from the kernels (September 8, 1950.) Divided out of No. 45783; Anti-dated to September 3, 1951. Comprising a pressure chamber, valve means for controlling the introduction of gases under pressure, instantaneous pressure release means, removable perforated containers for receiving nuts and indicator means for controlling the operations of the apparatus.

48550. Schoeller-Bleckmann Stahlwerke Aktiengesellschaft. Improvements in and relating to recuperator elements for recuperators for heating air. Wherein several welded pipes have longitudinal and transverse fins inside and outside respectively.

48551. Rocla Pipes Limited. Means for anchoring tension-wire windings of concrete pipes. (December 14, 1951.) Slotted threaded end protrudes from an embedded concrete pipe.

48552. Rocla Pipes Limited. Means for applying wire winding under tension to concrete pipes and method of winding same. (December 14, 1951.) Deforming means for wire supported for swinging movement on the carriage.

48553. Rocla Pipes Limited. Means for supporting and rotating concrete pipes. (December 14, 1951.) Removable resilient frictional gripping means compressed against the faucet and spigot ends of the pipe under radial pressure.

48554. Gulf Research & Development Company. Smoke suppressing system for use with machine tools. Comprising a distributor connected to a source of fluid for discharging the fluid as a curtain surrounding and enclosing the working portion of the tool.

48555. Gulf Research & Development Company. Cutting fluid jet mount for machine cutting tools. Comprising a hollow fluid distributor member adapted to be mounted in abutting relation to the tool and to project into the working relief angle between the tool and work.

48556. Baker Oil Tools, Inc. Apparatus for automatically filling well casing. Including a tubular member with a fluid

passage therethrough and a valve member having fluid pressure actuating surfaces.

48557. Drake and Fletcher Limited and A. P. Smith. Improvements in and relating to insecticide spraying machines. (December 4, 1951.) The machine comprises a power unit, a fan unit adapted to be driven by the power unit, and means for feeding insecticide into the air stream of the fan unit, all supported by a light framework adapted to be moved from place to place by hand.

48558. Void.

DECEMBER 4.

48559. P. Leslie, F. J. R. Batten and E. W. Smith. Improvements in the preparation of patterns for use in the production of articles of clothing, footwear and the like. (December 5, 1951.) Applying a layer of fabric capable of stretching in a model, treating the fabric with a liquid exerting a solvent action on the material and then allowing the solvent to evaporate.

48560. The General Electric Company Limited. Improvements in or relating to loudspeakers having a conical diaphragm. (December 5, 1951.) Having conical diaphragm indented at three places in its outer half, two of the indentations being disposed close to each other and the third being disposed diametrically opposite the gap between the other two.

48561. Dunlop Rubber Company Limited. Disc brakes for vehicles. (December 7, 1951.) Non-rotatable friction pad guide plates provided with holes for slidably locating friction pad material.

48562. Wingfoot Corporation. Improvements in drive fastener and method of making same. Consisting of a headed rivet the shank of which is surrounded by a split sleeve protruding shank being upset into engagement with the end of the sleeve.

48563. Thomas Robinson & Son Limited. Improvements in and relating to grain milling machinery. Comprising hopper without opening in its bottoms or walls but having below the rolls opening to upwardly directed suction pipe.

48564. Thomas Robinson & Son Limited. Improvements in and relating to milling machinery. Bottom of hopper being of

channel formation in which is mounted a mechanical conveyor.

48565. A. C. Kracklauer. Improvements in or relating to filter apparatus. Including a pair of annular feraminous discs an annular flexible filter sheet supported on each disc an annular sealing means compressing the outside portion of the said filter sheets.

48566. Borax Consolidated Limited. Improvements in or relating to weed-killers. Mixing granular-alkali metal or alkaline earth metal chlorate with crystalline borate, subjecting the mixture to heat treatment to liberate a part of water of crystallisation and then cooling and powdering the mixture.

48567. Borax Consolidated Limited. Supersaturated borate-chlorate solutions containing borax and methods and compositions for producing same. Dissolving in water a mixture of sodium chlorate and a sodium tetraborate containing from 0 to 5 moles of water.

DECEMBER 5.

48568. The British United Shoe Machinery Company Limited. Improvements in or relating to apparatus suitable for use in compacting hides. [Addition to No 43782.] Having a movable head member which causes the work compacting means and the anvils to occupy an operative relation to each other.

48569. Titan Company Inc. Improvements in electrolytic cells. Provided with means for stripping from the cathode loose metal and means for removing the metal.

48570. Alan Muntz & Company Limited. Improvements in or relating to radial flow exhaust turbines for use with diesel engines. (December 10, 1951.) Running clearances formed between narrow sealing surface on apex of blunt continuous annular edge on rim of rotor (or casing) and opposed sealing surface on casing (or rim); enlarge clearance spaces are provided directly adjacent two sides of the edges.

48571. The Permutit Company Limited. Improvements in ion-exchange processes for the treatment of liquids. Passing through two layers of hydrogen-ion-exchange materials with weak and strong groups respectively.

48572. Artbangle Limited. Improvements in or relating to frames for spectacles

and like eye wear. Each lens holder has, in addition to means for holding a lens therein permanently, also the means whereby additional glasses or lenses may be slipped in and retained temporarily within the holder.

DECEMBER 6.

48573. Sushil Kumar Mukherji. Improved structure or fabricated body-unit for attachment to tractors and the like. Body unit consisting of a carriage box built upon a chassis is detachably mounted on a tractor by means of a holding bracket.

48574. Void.

48575. The Renold and Conventry Chain Company Limited. Improvements in tensioners for chains, belts and the like. (December 28, 1951.) Comprising two co-axially members having co-operating parts which permit their relative movement.

48576. Electraulic Presses Limited. Improvements in and relating to pressure actuated bye-pass valves. (December 7, 1951.) Valve controlling passage connecting inlet and outlet for liquid to be bye-passed actuated in one direction by pilot pressure liquid in one direction through a piston and in the other direction by a spring; rate of flow of pilot pressure fluid in a passage communicating cylinder of the piston controls position and movement of piston.

48577. American Cyanamid Company. Improvements relating to the wet spinning of artificial filaments. Continuously ejecting into a coagulating bath a coagulable polymeric material in the form of a hollow peripherally interrupted stream containing a plurality of parallel separate jets disposed in a continuous pattern and interrupted by one or more jet-free peripheral zones

DECEMBER 8.

48578. Void.

48579. Dunlop Rubber Company Limited. Improvements in inflation valves for pneumatic tubes. (January 5, 1952.) "Insert comprising hollow cylindrical member with sealing ring and a pin therein having head at one end and a sealing member at other".

48580. Imperial Chemical Industries Limited. Manufacture of new diaryl-methane derivatives. (December 19,

1951.) By reacting p-cresol with α -alkylcyclopentene or α -alkylcyclohexene and the resulting product condensed with formaldehyde.

48581. Scaffolding (Great Britain) Limited. Improvements in or relating to roof structures. (December 19, 1951.) Formed from a network composed of a series of tranguled frames with its individual element being subjected only to direct tensile or compressive stress.

48582. Pilkington Brothers Limited. Improvements in or relating to a method of and apparatus for cutting a moving ribbon of glass. Forming longitudinal score lines in spaced relation on one face of the moving ribbon and interrupting each longitudinal score line for a short distance by a transverse score line.

48583. K. Wernert. Improvements in shaft packings for rotary engines. Packing members are pressed one against the other by resilient rubber tube.

48584. F. B. S. Grimston. Improvements in and relating to the building of ships' hulls and other vehicle bodies. Plates are sub-divided into rectangular panels so that resistance to bending of the marginal portions of panels is greater than that of other portions.

48585. Smith, Stanistreet & Co., Ltd. Improvements in or relating to condensation products of hydrocarpic acids. The acid chlorides of hydrocarpus oil are re-acted with 4, 4'-diamino-diphenyl sulphone.

DECEMBER 9.

48586. Cognate to Appln. No. 48573.

48587. KNOLL Aktiengesellschaft. Process of producing 3, 4-dimethyl-5-phenyl-2-iminothiazolidine. A salt of thiocyanic acid is reacted with 1-phenyl-1-halogen-2-methyl-amino-propane hydrohalide in the presence of a solvent or suspension medium.

48588. The Asahi Chemical Industry Co. Ltd. Improvements in or relating to manufacture of carbon disulphide. Feeding fused sulphur into the furnace by pouring the same direct into the carbon electrodes from inclined pipes.

48589. N. V. De Bataafsche Petroleum Maatschappij. Process for the preparation of a platinum metal catalyst on a carrier and catalyst obtained thereby. Combining an acid carrier in neutralized

- state with solution of a compound of metal of platinum group having a pH above 3.5, drying the product and removing neutralizing agent.
48590. Deutsche Gold-Und Silber-Scheidanstalt, Vormal's Roessler. Production of hydrogen peroxide. (April 24, 1952.) Hydrolytic decomposition of persulphuric acid and distillation of hydrogen peroxide formed done in apparatus made of graphite.
48591. The Linen Thread Company Limited. Improvements relating to nets, especially fishing nets, and methods and machines for producing and treating same. (March 13, 1952.) Tensioning the net made with knotted meshes from thermoplastic synthetic resin and passing same while tensioning through a heating medium so as to set the knots.
48592. C. A. Parsons & Company Limited. Improvements in and relating to heat exchangers. Having a matrix the rotation of which is effected by heat exchanging gas impinging on it.
48593. C. A. Parsons & Company Limited. Improvements in and relating to regenerative heat exchangers, especially for combustion turbines. (June 23, 1952.) Including a disc type rotor divided into two similar halves which are sub-divided by ribs into segments, disc type stator consisting of two halves in the openings of which are fitted annular ducts carrying sealing rings, a shaft in the middle of the two rotor halves and segmental matrix.
48594. C. A. Parsons & Company Limited. Improvements in and relating to regenerative heat exchangers. (June 23, 1952.) Having multiple disc type rotors in which the total frontal area of the heat exchanger is divided or split into a number of separate areas so as to reduce distortion in the sealing area and reduce the rotor speed.
48595. C. A. Parsons & Company Limited. Improvements in and relating to combustion turbines. Combined heating unit with a type of combustion chamber using a flame trap and vaporized fuel and having in combination therewith a regenerative heat exchanger.
48596. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric incandescent lamps comprising a reflector. Reflector forms part of a surface of revolution formed by rotation of parts of an ellipse about a line extending at right angles to the axis connecting the focal points.
48597. N. V. Philips' Gloeilampenfabrieken. Method for sealing off glass tubes, more particularly the exhaust tube of vacuum vessels. Glass tube and heating member rotate relatively to each other during sealing operation.
48598. Standard Telephones and Cables Limited. A coder for an electric pulse code modulation system. Comprising frequency modulation signal source and a cooling circuit including a mixer for each digit incorporated in a cyclic progression code frequency sources, means to apply predetermined frequency sources to said mixers, means to apply signals from the signal source simultaneously to each of the mixers and means to convert the signal output of the mixers to pulse code signals.
48599. Dr. A. L. Wenner-Gren. Track and vehicle installation for monorail type vehicles. At least the underside of the supporting member—and the faces of the uprights opposite to the direction of travel are rounded to have an aerodynamically favourable shape.

DECEMBER 10.

48600. KNOLL Aktiengesellschaft. Arylamides of salicylic acids, substituted by bromine and eventually by chlorine and process of producing the same. Salicylic acid, unsubstituted or substituted by halogen, or its phenyl ester is condensed with aryl amines. Alternatively salicylic amide is condensed with aryl halides. The products are eventually halogenated.
48601. Rash Behari Day. Lever-augmented human power driving mechanism. Crank levers of heel driven by pedal shaft or engine shaft coupled to oscillating levers alternately driving power transmitting wheel.
48602. Void.
48603. Electraulic Presses Limited. Improvements in and relating to pilot-operated direction control valves. (December 11, 1951.) Valve spindle adapted to be moved by pilot pressure in one or both directions relative to a number of ports so as to direct flow of primary and pilot hydraulic pressure to and from a hydraulic apparatus.

48604. Marconi's Wireless Telegraph Company Limited. Improvements in or relating to radio direction finders. (March 26, 1952.) Including two mutually perpendicular pairs of aerial elements, a radio-goniometer, a receiver which is provided with assymmetrical input from the geniometer, an indicator responsive to the phase difference between a reference voltage and the receiver output.
48605. Societe Des Usines Chimiques Rhone-Poulenc. New pyrimidine compounds. (October 22, 1952.) Reacting 2-amino-4-chloro-5 (4'-chlorophenyl)-6-ethylpyrimidine or its 2-acetyl amino derivative with an amine or a salt of such amine

DECEMBER 11.

48606. Poonam Chand Mistry. Constant Water flow governor. Comprising a tapered valve seating against opening in piston within an enclosing tube, the said valve or piston being slidable against compression spring to reduce space for water inlet between valve and its seat.
48607. Radio Corporation of America. Method of and means for producing records with synthesis of music. Producing a series of synthesized tones under the control of a coded record and including a signal channel having a first code determining individual not signals of a music and a second code determining plurality of characteristics of each note signals.
48608. Buffalo Electro-Chemical Company, Inc. Improvements in or relating to the production of hydrogen peroxide. Wherein one of the constituent of solvent mixture is naphthalene hydrocarbon or mixture thereof.
48609. Merck & Co., Inc. Process for preparing naphthalene derivatives and product resulting therefrom. Heating 2-(β -dialkylaminopropionyl) - 6-alkoxy-naphthalene with an alkyl ester of acetoacetic acid and converting the cyclohexenone ring in the resulting product to cyclohexanone, cyclohexanol or cyclohexenol.
48610. Monsato Chemical Company. Improvements in or relating to process for the mass polymerization of styrene. Dissolving 0.03 to 0 part of a peroxy compound and 0.1 to 0.6 part of a saturated aliphatic acid having 12 to 20 carbon atoms in 100 parts of styrene, heating the monomer a 85-95°C then raising temperature to 170-190°C and finally heating for 3 to 5 hours at 170-190°C.

DECEMBER 12.

48611. M. A. Chaudary. Improvements in and relating to gear wheels. Teeth cut an angle and not extending full width of the wheel, alternate teeth extending from opposite sides.
48612. Pechiney Cie. De Produits Chimiques Et Electrometallurgiques. Process and apparatus for separating metals. Distilling metals at temperatures, pressures and concentrations at least one of the three factors being controlled at plurality of points.
48613. Alan Muntz & Company Limited. Improvements in and relating to the starting of internal-combustion-operated free-piston engines. (December 28, 1951.) Successive starting operations initiated by movement of rotary member from each predetermined position to next succeeding predetermined position; member locked temporarily in each position till corresponding operation is complete.
48614. T. Hindmarch. Improved power transmission mechanism. (February 27, 1952.) Two or more pinions on one or more intermediate shafts engaging directly or indirectly pinions on parallel input and output shafts; at least two pinions freely rotatable and having fluid operated clutches for driving connection with their shafts, other pinions being fast on their shafts.
48615. Void.
48616. H. W. Burrington. Fused vitreous compositions as nutrients for plant growth. Comprising fused synthetic vitreous matrix containing iron and also plurality of substances selected from the class consisting of manganese, zinc, copper, boron, cobalt and molybdenum.

48617. Hemphill Company. Improvements in method of knitting. Knitting pattern yarn and other yarn together in one or more wales only of at least one course other than said plurality of courses in which said pattern yarn is knit alone.

DECEMBER 13.

48618. Shyam Parkash. Improvements in or relating to electric stove cum-radiator. Providing the electric stove with a hinged rest with means for securing the rest in inclined position.
48619. R. S. Curry. Improvements in receptacles for the production of ice in

refrigerators. Comprising cup of resilient material of poor heat conductivity and metallic means projecting through the bottom of the cup serving between the interior and exterior of the cup a path of good heat conductivity.

DECEMBER 15.

48620. Dr. G. M. Nabar and S. Sundaram. A method for single bath scouring and bleaching of textile materials. A process of desizing scouring and bleaching of textile materials is done in a single operation of boiling either as a batch or continuous process in an aqueous solution containing sodium chlorite and an ammonium salt.
48621. Takeda Pharmaceutical Industries Limited. Disulfide-type derivatives of vitamin B and a method of preparing the same. Converting SH-group in Vitamin B₁ or its derivatives into S-S-R² group where R₂ is alkyl, unsaturated alkyl, aralkyl or aryl.
48622. Kalipada Chatterjee and Surendra-nath Kundu. Improved knot for manufacture of wire fencing or netting. Each wire is given a complete turn around the other and then the forward end of horizontal wire is turned vertical and that of the vertical into horizontal.
48623. Imperial Chemical Industries Limited. Manufacture of natural and synthetic rubbers and rubber articles. (December 19, 1951.) Incorporating in natural and synthetic rubbers an anti-oxidant comprising bis-(2-hydroxy-3-alkyl-cycloalkyl-5-methyl)-methane.
48624. Imperial Chemical Industries Limited. Process for the manufacture of new dyestuff intermediates and such intermediates when so manufactured. (December 28, 1951.) Treating maleic or fumaric dinitrite or a Δ^1 tetrahydro-phthalonitrile with ammonia, an amine, an alkylalcohol or mercaptan.
48625. Imperial Chemical Industries Limited. Process for the colouration of substrates especially textile materials and paper with tetra-aza-porphins. (December 28, 1951.) Applying to the substrate a solution or suspension of a dyestuff intermediate for the production of tetra-aza-porphins and subsequently heating the substrate.
48626. E. Gretener. Method of reproducing images in colour. Subdividing dye layers into minute surface elements, related surface elements of different layer being one above the other in register and recording the brightness values of the separation image within the surface elements by varying size of colorless transparent areas on the transparent background of the elements, the smaller transparent areas appearing within the layer ones, within each surface element.
48627. American Cyanamid Company. Improvements relating to photo-luminescent pigments. (March 21, 1952.) Organic dyestuff combined with thermoplastic resinous substrate.
48628. Compagnie De Caoutchouc Manufacture "DYNAMIC". Societe Anonyme. Improvements in the manufacture of micro-porous screens (July 10, 1952.) Mixing plastic materials and/or rubber, dry absorbent materials, loading agents and plasticisers, moulding it, moderately compressing and heating at a temperature between 120°C and 180°C.
48629. Gafach Gesellschaft Fur Angewandte Chemie m.b.H. Improvements in or relating to the physico-chemical conversion of pit coals. Petrographic components of seam coal are treated stepwise according to their sensitivity to sliding or shear stresses by means of rollers operating in opposite directions.
48630. Cooperative Verkoop-En Productievereniging Van Aardappelmeel en Derivaten "Avebe". G.A. Process for fractionating starch. Dissolving starch under pressure in aqueous salt solution, precipitating amylose and amylopectine by cooling successively.
48631. Ciba Limited. Process for the manufacture of new cobaltiferous azo-dyestuffs and process for using them. By reacting a monoazo dyestuff free from sulfonic acid and carboxylic acid groups with an agent yielding cobalt.
48632. K. Sakamoto. Improvement in the mechanism for easing motion of warp yarns in a power loom. Roller over which warp yarns are let off carried by arms of a shaft, a lever fixed on which is adapted to be swung by eccentric disc revolved in connection with tappet shaft.
48633. K. Sakamoto. Improvement in a letting-off motion mechanism of a power loom. Block chain around brake ring having first link connected to frame and last link to intermediate point of lever having at one end brake shoe for the ring and other end connected weight lever hook.

48634. K. Sakamoto. Improvement in a letting-off motion mechanism of a power loom. Vertical lever swung in accordance with decrease of yarn beam effects adjustment of a travelling roller changing leverage of weight lever, through a pivoted horizontal lever by co-operating cam slot and roller mechanism.

DECEMBER 16.

48635. Dunlop Rubber Company Limited. Improvements in or relating to supports for textile spindles. (January 19, 1952.) Comprising upper and lower spindle bearing carried by a bearing unit the outer surface of which is inwardly tapered from a region adjacent the upper bearing to a region intermediate the bearings.

48636. United States Steel Corporation. Method and apparatus for producing sheets free from pin holes. Passing the sheets past a pin hole detector, directing the sheets with pin holes to a reject piler, turning the sheets not rejected upon the first testing end to end, passing the sheets past a second pin hole detector and directing sheets having pin holes therein to a reject piler.

48637. P. August and Dr. L. a Porta. Improvements relating to mixing machines. The gap between the mixing worm and the mixing trough, within the zone filled with the mix, is given the shape of a crescent, the tip of which at the entrance side of the worm being above the operational level of the mix.

48638. Ciba Limited. Manufacture of an etherification product of a poly-glycidyl ether of a poly-oxy compound with a higher monohydric alcohol. Wherein the ether, having two hydroxyl groups but free from reacting with epoxid groups, is reacted with higher monohydric alcohol having more than 10 carbon atoms chain.

DECEMBER 17.

48639. Void.

48640. Council of Scientific and Industrial Research. Preparation of starch from starch bearing plant materials. Liberating starch from tubers by dissolving the cell walls by enzymes derived from micro-organisms.

48641. British Celanese Limited. Improvements in the production of filamentary materials. [Addition to No.

45689.] [Divided out of No. 45689; antedated to August 20, 1951.] Urging filament-forming powder against one side of heated plate having spinning orifices in a gaseous environment whose partial pressure or oxygen is below the partial pressure of oxygen of the atmosphere.

48642. Perfogit Societa per Azioni. Continuous polycondensation of amino-acids. The amino acid is caused to travel continuously through a heated condensation space, while the water formed in the condensation is continuously eliminated.

48643. Davy and United Engineering Company Limited. Improvements in or relating to the treatment of ferrous metals. Void after publication. Ferrous metal treating for refining.

48644. Mavor & Coulson Limited. Improvements in endless belt conveyors. One loop forming pulley moved by positive adjustment device and another loop forming pulley under a continuously applied load.

48645. Mavor & Coulson Limited. Improved belt conveyor. Driving assembly consist of a pair of endless power driven cables bridged at intervals by cross carrier members.

48646. Mavor & Coulson Limited. Improvements in endless belt conveyors. A frame which is readily moveable lengthwise with an upper level pulley, a lower level rear pulley and a terminal front pulley.

48647. Harry Ferguson Inc. Improved disc harrow. Comprises a pair of disc gangs journaled to rotate about a transverse axis, each gang having a bumper.

48648. The General Electric Company Limited. Improvements in or relating to electroluminescent devices. (December 19, 1951.) Comprising a blown glass bulb carrying units inside in the order, a first conducting coating, an insulating coating of luminescent material and a second conducting coating, the first conducting coating being at least partially transparent.

48649. H. W. Burrington. Improvements in or relating to freeze stable latex and paint prepared therefrom. Aqueous emulsion copolymer of styrene and of a diolefin polymerized in the presence of a persulphate and anionic emulsifying agent.

48650. The Dow Chemical Company. Improvements in or relating to electrolytic apparatus. Comprises a cell chamber,

- bipolar electrodes, spacers, troughs and cover.
48651. G. Overton. Improvements in or relating to detachable power driven wheeled unit for manually operated vehicles. Motor driven side car that is detachably connected to a bicycle.
48652. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Tropic acid N-(β -picolyl)-N-alkenylamides and process for the manufacture thereof. [Addition to No. 44456]. Reacting tropic acid chloride with alkenyl- β -picolyl-amine.
48653. British Telecommunications Research Limited. Improvements in or relating to mechanisms for producing step-by-step linear drive. (December 31, 1951.) Drive member describing rectangular movement responding to reciprocation of actuating member; after initial movement, the succeeding movements effected by spring action as mechanical constraining means are successively rendered ineffective by preceding movement.
48654. M. D. Ambaswamy. Size adjustable ready-made turbans, caps or the like. Cutting the vertical wall and overlapping and fastening the cut ends with the help of suitable means such as buttons.
48655. Void.
48656. Director, Indian Institute of Science, Bangalore. Improvements in and relating to compression-ignition internal combustion engines. Volatile fuel carburetted and mixed with intake air and non-volatile fuel injected with engine metered in predetermined proportions depending on operating conditions.
48657. Timboga Corporation, Industrial Consulting Engineers. An improved desk stand for calendar blocks, memo pads or the like. Consisting of an upper member carrying calendar blocks coating with a base member thereby enclosing an enclosure.
48658. Timboga Corporation. Improvements in or relating to ink wells or the like. Consisting of a body having an enclosure with an opening on one side and a rim to locate it in the ink, bottle neck.
48659. Timboga Corporation. Improvements in or relating to ladies' sanitary appliances or the like. Consisting of a flat container having a cavity with a frontal opening containing a pad of an absorbent material.
48660. N. V. De Bataafsche Petroleum Maatschappij. Process for separating one or more solid hydrocarbons of complex hydrocarbon compounds from a mixture thereof with a highly polar liquid. The solid substance contaminated with a highly polar liquid is contacted with a non polar or less polar carrier liquid such that the contact angle θ is less than 90° , whereby the solid merges into the carrier liquid.
48661. N. V. De Bataafsche Petroleum Maatschappij. Process for separating one or more solid substances, such as solid hydrocarbons or complex hydrocarbon compounds, from a mixture thereof with oil. A part of the used auxiliary phase is brought into contact with oil or a mixture of oil and solid substance still to be treated, preferably in counterflow.
48662. T. Hindmarch. Improvements in or relating to power transmission mechanism. (December 20, 1951.) Forward and reverse pinions free on input shaft but engageable therewith by fluid operated clutches, and meshing with intermediate wheels on intermediate shaft output wheel on which drives common output wheel.
48663. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of making electric discharge tubes and discharge tubes made by means of such methods. Cathode support coated with alkaline earth carbonates to which barium zirconate is added.
48664. Standard Telephones and Cables Limited. Improvements in or relating to toggle operated switching mechanisms. (March 14, 1952.) Comprising toggle operated switching device having two positions of stability and a co-operating detent movable by independent means into, or out of, the path swept out by a moving cam member so as to engage a predetermined one of said surfaces.
48665. W. Klemm, A. O. Berglein and H. Bollin. Vehicle coupler, especially for rail vehicles. Two identical coupler units each with carrier body yieldingly arranged in substantially horizontal position about the hook, a catch pivotally mounted in the carried body.
48666. H. Putzer. Overload safety device for hoisting apparatus or the like.

(October 8, 1952.) Comprising a driving member and a driven member and a resilient friction ring trapped between them.

DECEMBER 20.

48667. Council of Scientific and Industrial Research. Improvements in or relating to the utilization of waste mica for the manufacture of insulating bricks, slabs, tiles or the like. Mica or mica-ceous material with clay, glass, gum or other binder is moulded, dried and heated to temperature between 800-1200°C.
48668. May & Baker Limited. Improvements in bisquaternary ammonium salts and processes for their preparation. (December 21, 1951.) Compounds of the type $X-(CH_2)_4-X$ are reacted with compounds 'Y' wherein 'X' represents either an acid residue of a reactive ester, such as a halogen atom, or an ethylmethylamino or diethylamino group and 'Y' represents diethyl-methylamine or a reactive ethyl or methyl ester respectively.
48669. Void.
48670. K. M. Lad. An improved umbrella frame. The frame comprises round headed long ribs fitted in a lower socket on the stick and round headed short arms fitted in the upper socket, the other round headed ends of the short arms being fixed on the long rib by a bracket having cavity.
48671. Comptoir Des Textiles Artificiels S.A.R.L. Process for the production of viscose rayon suitable for the production of stable fibre. (January 21, 1952.) Spinning into a coagulating bath a viscose prepared from cellulose pulp characterised in that said bath contains upto 30 grams./litre of sulphuric acid and at least 50 grams./litre of sodium sulphate.
48672. Pechiney Cie. De Produits Chimiques Et Electrometallurgiques. Process for the production of aluminium. Reducing molten alumina with carbon, passing the gaseous products formed in contact with carbon and decomposing the aluminium carbide produced.
48673. British Timken Limited. Improvements relating to hornguide linear of axle boxes. (October 25, 1952.) Consists a bending up the side portions of a flat metal plate along the lengths of two grooves performed in one face thereof such that machine-clearance corner grooves are produced in the liner.
48674. Societe Anonyme Pour Les Applications De L'Electricite Et Des Gaz Rares—Etablissements Claude-Paz & Silva. Electrode for electric discharge apparatus. Comprising at least aluminium and one or more metals, the melting point of which is higher than that of aluminium.
48675. Texaco Development Corporation. Improvements in or relating to reduction of metal oxides. Introducing reducing gas generated outside, into blast furnace above the point of introduction of oxygen-containing gas.
48676. Ciba Limited. Process for fixing dyestuffs. A water-soluble acyl derivative of a sparingly soluble to insoluble dyestuff is hydrolysed on a substratum in an alkaline medium in the presence of a peroxide compound.
48677. Western Electric Company Incorporated. Methods of utilising a change of phase for controlling the distribution of a solute in a body. (February 8, 1952.) A temperature differential is established in the material to produce a zone of phase differing from the remainder of the body, and causing the zone to traverse at least a part of the material by changing by thermal means.
48678. E. K. Cole Limited. Improvements in moving-coil loudspeakers. (January 11, 1952.) Having a magnetic assembly of two energising windings on separate limbs, one of the windings being constituted by a primary winding of an output transformer of an amplifier to which the loudspeaker is to be connected.
48679. N. V. De Bataafsche Petroleum Maatschappij. Improvement of the knock stability of gasolines. Firstly converting naphthenes therein to aromatics in presence of dehydrogenating and isomerising catalyst and hydrogen at above 425°C and then dehydrocyclizing in presence of platinum on non-acid carrier.
48680. Ford Motor Company of Canada, Ltd. Auxiliary suspension bumper for motor vehicles. A bumper having a sprung and unsprung member has in between, a unitary bumper of resilient material having wings projecting outwardly from the base, supported on one of the said members.

48681. Unilever Limited. Improvements in or relating to the treatment of soap solutions to obtain fatty matter therefrom. (January 8, 1952). By mixing aqueous soap solution with an acidic substance, shattering all the water-in-oil emulsion clots and separating the fatty phase.
48682. The Motherwell Bridge and Engineering Company Limited, and R. H. Foster. Improvements in or relating to roofs for storage tanks or similar structures. (December 28, 1951.) Comprises peripheral curb, a plurality of radially disposed panels, some of which are provided with stiffening flanges, and a centrally disposed crown member to which all panels are secured.
48683. R. A. E. Higonet and L. M. Moyroud. Type composing machine. The combination of a keyboard, a selector to represent coefficient, a multiplier to compute a product and a justifier.
48684. Rotary Hoes Limited. Rotary cultivator attachment for a tractor. Comprising a rigid frame pivotally attached to a tractor, which frame supports a transmission shaft and an earth working rotor below the shaft, ground engaging wheel for controlling the depth of operation of rotor, and means for lifting the cultivator about its pivotal axis.
48685. John McNeil & Company Limited. Hydraulic-pneumatic intensifier apparatus for use in conjunction with rolling mills. Applying pressure to the caps of bearings of rolling mills including cylinder and plunger means and power means including a vacuum cylinder and a piston operatively connected the plunger.
48686. National Aluminate Corporation. A method of and a liquid for generating steam. Amino ether alcohols of at least 1200 molecular weight having polyoxyalkylene chain having different terminal groups connected to different carbon atoms are added to feed water.
48687. Void.
48688. Children's Cancer Research Foundation, Inc. Improvements in or relating to the production of dihydrotriazines and salts thereof. Reacting a compound having $\text{a}=\text{CO}$ or $\text{a}=\text{CHO}$ group with an aryl biquanide or a salt thereof in an acid medium at an initial pH of 0.2 to 5.
48689. Imperial Chemical Industries Limited. Improvements in or relating to power gas generating cartridges for the actuation of engine starters. (July 24, 1952.) Cylindrical annular main charge spaced from base and cylindrical wall of cartridge case by stilts and projections of a self combustible composition.
48690. Wingfoot Corporation. Improvements in cellular composition. Comprising rubbery copolymer of butadiene and styrene, resinous copolymer or butadiene and styrene, and reinforcing filler.
48691. Mysore Chemicals Limited. A rotary digester. Rotary double walled drum having a central mixing shaft and doors with removeable filtering sieves.
48692. Dipl. Ing. W. Degen. Filter, especially for piped wells. Perforated filter bodies are covered with gravel the particles of which are bounded to one another and adhered to the wall by means of a synthetic resin.
48693. Void.
48694. Void.
48695. British Telecommunications Research Limited. Improvements in or relating to electrical devices for storage of information. (December 31, 1951.) Comprises a plurality of sets of cold cathode gas discharge tubes, the first set being selectively operated while the tubes of subsequent sets are primed by tubes of preceding sets.
48696. E. Bettoni. Improvements in or relating to carding machines. Comprising revolving flats extending over about three fourth of main card cylinder, and also the feed members, comber, doffer, waste collector and dust separators on one and same side of the machine.
48697. C. R. King. Petrol atomizer. Two or more rotating bladed agitators supported by ball bearings in casing fitted between carburettor and suction manifold.
48698. Void.
48699. Hemphill Company. Improvements in mechanism and method of knitting. The needle recess is arranged and the yarn drawn in such a way that the yarn is supported by the outer surface of the needle shank on either side of said recess.
48700. Lining Components Limited, C. F. Hammond and W. Shackleton. Improvements relating to drums or the like. Comprising sheet metal shell lined by a flexible bag anchored to shell where head of shell joins the body.

48701. American Cyanamid Company. Method of counteracting excess hydro-sulfite consumption in reducing baths adapted for high temperature vat dyeing. (March 10, 1952.) Adding to the reducing bath at least one ionizable manganese compound.
48702. American Cyanamid Company. Method of counteracting excess hydro-sulfite consumption in reducing baths adapted for high temperature vat dyeing. (March 10, 1952.) Adding to the reducing bath at least one trialkanolamine.
48703. American Cyanamid Company. Method of counteracting excess hydro-sulfite consumption in reducing baths adapted for high temperature vat dyeing. (March 17, 1952.) Adding to the reducing bath at least one ionizable magnesium compound.
48704. Ruhrchemie Aktiengesellschaft. Process for the production of dialdehydes or derivatives thereof. Reacting diolefin with carbon monoxide and hydrogen in presence of a diluent or solvent, a polymerisation inhibitor, a stabiliser and a cobalt compound for yielding cobalt hydrocarbonyl during the process.
48705. The Visking Corporation. Method of and apparatus for treating plastic structures and products produced thereby. (February 18, 1952.) Surface subjected to high voltage electric stresses accompanied by corona discharge.
48706. Wingfoot Corporation. Improvements in metal air-craft wheels. Comprising a rim, axially spaced hubs and continuous webs extending from the hubs axially inwardly and radially outwardly to the rim, the webs being formed with circumferentially extending waves.
48707. N. V. De Bataafsche Petroleum Maatschappij. Portable apparatus for spraying liquids for the treatment of plants. Internal combustion engine is coupled to a fan, to the discharge end of which there is the liquid atomizer.
48708. Manganese Chemicals Corporation. Method of carbonating ammoniacal solutions. Passing CO_2 gas through aqueous NH_3 , CO_2 solution of mol. ratio 1.7 to 1 and simultaneously mixing with second similar solution of greater mol. ratio, to get a mixture of same mol. ratio.
48709. Coal Industry (Patents) Limited. Improvements in and relating to the getting of coal or other material. (December 28, 1951.) Power operated closed loop cutting unit arranged in a plane transverse to the longitudinal axis of machine, a collector at the rear end of the unit, and conveying means.
48710. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a method of producing an aqueous solution containing vitamin B_1 . Aqueous solution of vitamin B_1 stabilized by thioglycollic acid, thio-malic acid methionine, thiourea, and other listed compounds.
48711. K. G. Ringdahl. A self-supporting structural element, of reinforced concrete such as a roofing, joist, wall element or the like. Two reinforced concrete slabs between which one light insulating slabs preferably of cellular concrete slabs are interconnected by means of reinforced concrete bars.
48712. Extraction Continue De Smet Societe Anonyme. Process for the refining of oils and fatty materials and apparatus for carrying out the process. By mixing crude miscella with a neutralising agent and a solvent substance which dissolves partially in the solvent of the miscella and in the neutralising agent.
48713. Ciba Limited. Process for the manufacture of genins. A product obtained by the treatment of crude glycoside with acid, is reacted with alkaline earth hydroxide and the insoluble portion is separated and extracted.
48714. Ciba Limited. A process for the isomerisation of compounds of the spirostane series. Heating compounds of the spirostane series with propionic anhydride under atmospheric pressure.
48715. Ciba Limited. Cosmetic Preparations. Characterized in containing benzyl ester and for benzyl ether.
48716. H. Krug. Improvements in and relating to diesel engines. Fuel applied as thin film on combustion chamber wall, and released gradually in vapour form by rotating incoming air mixed therewith and burnt.
48717. Maschinenfabrik Augsburg Nürnberg A.G. An improved cleaning machine for the intake gratings of hydraulic power stations pumping plant and the like. Wherein the usual guiding track for the rack lying above the

- grating is movably arranged such that it can be connected selectively to the one or the other grating.
48718. The Western States Machine Company. Centrifugal loading control mechanism for cyclical centrifugal installation. Control means mould progressively in response to charge induced movements of the device and to close the gate progressively.
48719. Council of Scientific and industrial Research. Preparation of fructose from the agave plant. Hydrolysing the soft underwood of the Agave plant by acid.
48720. Void.
48721. Void.
48722. The General Electric Company Ltd. Improvements in or relating to the manufacture of electrical amplifying devices. (December 31, 1951.) Forming on the surface of semi-conducting material of one conductivity type a thin layer of same material of the opposite conductivity type, disposing a second semi-conducting material of said one conductivity type with its surface contacting said layer and heating the two bodies in an inert atmosphere while pressing them together.
48723. Aktiebolaget Pluria. A method of bleaching, dying and otherwise treating with liquid textile and other fibrous materials and apparatus for carrying out the method. Placing the textile material and the treatment liquid in a circulating system under vacuum and then withdrawing the vacuum so that the liquid may be sucked into the material and then removing the excess liquid after completion of sucking-in operation.
48724. Tecalemit Limited. New or improved spring operated hose reels. (July 17, 1952.) Characterised in that the fluid to be distributed is supplied through a bore in the drum shaft, and an intermediate hub being mounted for limited rotation about the drum shaft and having one end of the spring connected to it.
48725. Standard Telephones and Cables Limited. Improvements in or relating to capacitors. (March 17, 1952.) [Addition to No. 46588.] Characterised in that capacitors are impregnated by a plasticiser for the base resin or by a thermosetting mixture of a base resin plus a hardener and a plasticiser which is cured after impregnation when the sealing mixture is being cured.
48726. Trubenised (Gt. Britain) Limited. Improvements in and relating to fused fabric assemblies. (January 1, 1952.) Wherein some interliner strands are of thermoplastic material becoming adhesive on heating while others are of a lesser extensible material.
48727. Austria Tabakwerke Aktiengesellschaft, vorm. Österreichische Tabakregie. Apparatus for damping of bales, especially for the preparation of oriental tobacco. A safety cover is on a basin forming a treatment space, the inlet and outlet ducts forming a closed circuit with the said treatment space.
48728. Metron Warme-und Messtechnik Gustav Griesel K. G. Method of electric arc welding with coated or shielded electrodes, and electrode and electrode holder for carrying out said method. Electrodes which are only unilaterally exposed are passed in succession through guiding means of rollers of an electrode holder.
48729. Imperial Chemical Industries Limited. Production of artificial films. (January 23, 1952.) Cooling a melt extended film of polymeric material passing it downwards in its molten state into a pool of cooling liquid between the nip of two contra-rotating rolls.

JANUARY 2.

48730. P. V. Holay. Refractometers. Comprising a plane body, a horizontal and a vertical line intersecting each other marked thereon, a circle drawn with the centre at the said intersection, lines drawn on scale in two opposite quadrants parallel to vertical line, a pointer pivoted at the centre of circle and moving within a quadrant, a line drawn in opposite quadrant such that it intersects the circle at unit distance from normal in opposite quadrant.
48731. Precision Processes (Textiles) Limited. Improvements relating to the treatment of wool. (January 4, 1952.) Treating fabrics with an aqueous solution of permonosulphuric acid at a pH less than 8.
48732. E. K. Cole Limited. Improvements in or relating to sound producing diaphragms for loud speakers or other acoustic apparatus. (January 19, 1952.) The cone being supported at least at one of its extremities by a membrane so shaped that it is given a resilience not only radially but also in a direction normal thereto.

48733. Ciba Limited. Cosmetic preparations. Characterized in containing pregnenolone.

JANUARY 3.

48734. Void.

48735. Void.

48736. J. A. Cuthberston. Improve-
plants. The digester comprises an
outer wall with an inlet and outlet
opening and an inner chamber within
the digester formed by an inclined wall,
said inner chamber, being open at the
top, and having openings in the inclin-
ed wall at or about its base.

48737. Void.

48738. J. A. Cuthberston. Improve-
ments in or relating to pneumatic
conveyors. (April 15, 1952.) Series of
flexible units each having an endless
flexible tension member, at least one of
which is disposed across substantially
the entire width of the unit.

48739. J. A. Cuthbertson. Improve-
ments relating to endless tracks for
tractors and other vehicles. (April 16,
1952.) Each flexible unit having an
endless flexible tension member and
longitudinally spaced guide means at
least one of which means is disposed
across substantially the entire width
of the unit.

48740. N. P. S. Straussler. Improve-
ments in or relating to pneumatic
wheels for vehicles. Comprising an
inflatable envelope of flexible non-
elastic material having a cylindrical
peripheral wall.

48741. PERFOGIT Societa per Azioni.
Method and apparatus for processing
synthetic yarns. Filaments are washed
in continuous operation.

48742. N. V. De Bataafsche Petroleum
Maatschappij. Process for the prepara-
tion of a hydrocarbon oil having a
reduced content of gum-forming com-
ponents. Heating with oxygen at
75°—125°C and then at least at 140°C
whereafter separating oil from liquid
polymers thus formed.

48743. Arvey Corporation. Improve-
ments in or relating to a process of
forming polycyclic compounds contain-
ing a terminal epatonic component,
compounds resulting therefrom and in-
secticidal compositions containing said
compounds. [Divided out of No. 45959,
ante-dated to October 4, 1951.] Adding

an epatonic component to the dieno-
philic component of Diels-Alder adduct
of a hexahalocyclo-pentadiene as the
diene and a dienophile.

48744. Arvey Corporation. A process of
forming a Diels-Alder condensation
product and the products resulting
therefrom and insecticidal compositions
containing the same. [Divided out of
No. 45959, ante-dated to October 4,
1951.] Reacting a hexaholocyclopenta-
diene as a diene with a mono-olefinic
dienophile according to the Diels-Alder
method.

JANUARY 5.

48745. O. Benedek. Improvements in
and relating to the degumming of
fibrous plant material. Treating fibrous
material with a dilute aqueous solution
of a salt of an alkali or alkaline earth
metal and then with an aqueous solu-
tion of a surface active agent consist-
ing of a sulphated fatty oil or fat and
containing a phosphate.

48746. O. Benedek. Process for render-
ing fibrous plant material suitable for
the manufacture of surgical wadding
and surgical wadding made therefrom.
Treating at atmospheric temperature
with an aqueous solution of a water
soluble metallic salt which has neutral
reaction.

48747. Anstalt fur die Entwicklung von
Erfindungen und gewerblichen Anwen-
dungen ENERGA, Projectile equipped
with a safety device. The detonator is
housed in the inoperative position in-
side a safety cage and is adapted, after
firing of the shot to take up its opera-
tive position.

48748. Wagon Repairs Limited. Im-
provements in or relating to frame-
work structures and elements for use
therein. (January 14, 1952.) Two
strips each having a row of aligned
equally spaced elongated slots being at
right angle to one another and a gen-
erally triangular anchor plate being
sandwiched between them.

48749. M. H. Detrick Company. Im-
provements in fan end construction for
furnaces. (May 14, 1952.) Refractory
hanger members with means for mount-
ing them in staggered relation and wall
forming refractories supported from
them.

48750. Void.

48751. Foundry Equipment Limited. Improvements in elevators. (May 7, 1952.) Void after publication. Each bucket having a flap in the form of a false bottom, one edge of which hingedly attached within the bucket at a point near the top of the bucket back.

48752. Void.

48753. M. Vouvard. Method for the concentration of sea water for the extraction of salts. Several concentrating steps submitting sea water to pulverisation in the air obtained by mechanical or pneumatic means to provide evaporation in spatial volume.

JANUARY 6.

48754. Void.

48755. Imperial Chemical Industries Limited. Packaging of yarns and filaments. (February 1, 1952.) Impinging on yarn coming to container *via* guide, cross currents of gas or vapour.

48756. Imperial Chemical Industries Limited. Improvements in and relating to the production of sulphur and sulphur dioxide. (February 1, 1952.) Indirectly heating a mixture of calcium sulphate, silicons, and/or argillaceous material and coal or reactive coke or charcoal.

48757. Monsanto Chemical Company. Improvements in or relating to process of preparing amid-nitrogen-containing polymers and the new chemical compounds resulting from said process. Contacting heteropolymer of isobutylene and maleic anhydride with ammonia.

48758. N. V. Maatschappij tot Exploiteren van Octrooien en Licenties "Matepa". A method of manufacturing a resilient covering layer, more particularly suited for use as a floor covering or as an underlayer therefor. Corrugated cardboard is treated with latex.

48759. Tecalemit Limited. Pistol device for atomising and projecting thick or viscous materials. (November 17, 1952.) A follower slidably arranged with the tubular body and which under the pressure of the fluid acting upon it is adapted to feed the material from the body into the atomiser assembly.

48760. Gelsenkirchener Bergwerks Aktiengesellschaft. Aqueous dispersions having a bituminous base. Bituminous dispersion is characterised in

that it comprises at least 0.5% by weight of one or more cyclic solid hydrocarbons having at the most three rings.

48761. R. Bauer. Quick coupling for pipelines or the like. The clamping device is formed by a clamping lever and a hooked shaped coupling member is provided to the lever.

48762. Radio Corporation of America. Spindle adapter for record changers for phonographs and the like. Spindle adapter including an axially extending socket opening therein for receiving a small diameter spindle and means responsive to a record ejector member in said turntable for actuating record separating means

JANUARY 7.

48763. Standard Telephone and Cables Limited. Improvements in or relating to electro-magnetic light-current contact-making relays. (April 24, 1952.) Contact-spring pile-up is mounted directly on the yoke of the winding.

48764. Standard Telephones and Cables Limited. Improvements in or relating to loading coils, (June 6, 1952.) Toroidal core with even number of windings connected in pairs in parallel aiding.

48765. Standard Telephones and Cables Limited. Mounting arrangements for components of electrical circuits. (January 9, 1952.) Components mounted and secured by wires embedded end first into thermoplastic material.

48766. C. W. Cheney and Son Limited and C. W. Cheney. Improvements in metal fastenings for attache and suitcases and the like. Provided with boundary flange and spaced integral prongs extending from said flange.

JANUARY 8.

48767. Void.

48768. The General Electric Company Limited. Improvements in or relating to electric motor control systems. (March 21, 1952.) Comprising a motor arranged for rheostatic braking by connection of the armature of the motor in a closed circuit with a braking resistance and by excitation of a field winding of the motor.

48769. Void.

JANUARY 9.

48770. Sudhir Lal Mukherjee and Albert David Ltd. A process for improvements in or relating to the manufacture of 3:5-dioxo-pyrazolidine derivative. Di-substituted malonyl chloride, (Br) (Butyl) C (COCl)₂, is reacted with hydrazo-benzene.

48771. Sudhir Lal Mukherjee and Albert David Ltd. A process for the manufacture of "3:5-dioxo-pyrazolidine derivatives. Di-substituted malonyl halide, viz. (Hal (R₁) C(COR'')₂ where Hal means halogen, R'' means chlorine or bromine and R₁ means lower alkyl, is reacted with hydrazobenzene.

48772. Void.

48773. E. Uher. Cone friction coupling for flywheels. Cone friction coupling between a flywheel and a shaft having an axially moveable conical member inter-connected with shaft through an axially deformable spider.

48774. Ropeways Limited and J. W. Foster. Improvements in and relating to conveyors and the like. (January 11, 1952.) Number of interconnected load carrying trollies tumbler rollers and tracks along which the trollies move, supported and guided along upper load carrying and lower return reaches and separate means to drive or haul the unit.

48775. A. S. Bhathena and N. Khurshedji. Improvements in or relating to dental chairs or like appliances. Wherein leg section is adjustable to take flat position in relation to seat.

JANUARY 10.

48776. Stamicarbon N. V. Double conversion between solutions of ionogenic substances by means of an ion exchanging process. Passing the loading solution through columns of ion exchanger to be loaded and passing the regenerating solution through column of ion exchanger to be regenerated.

JANUARY 12.

48777. Void.

48778. Standard Oil Development Company. Improvements in or relating to a method of coking carbonizable materials. Cracking or coking the material in a zone maintained between 800 to 1200°F.

48779. Standard Oil Development Company. Improvements in or relating to residuum coking and cracking. Hydrocarbon feed is coking and is then contacted with cracked catalyst.

JANUARY 13.

48780. Void.

48781. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric discharge tubes and cathodes intended for use in such discharge tubes. Cathode containing a closed cavity containing one or more alkaline earth metal-oxides, the maximum quantity of which is determined by the quantity required to form definite compounds with acidforming oxides provided, whilst a small quantity of borium, borium carbide, carbon, silicium carbide, a metal carbide or a metal boride.

48782. Standard Telephones and Cables Limited. Improvements in or relating to the manufacture of telephone cables. (February 20, 1952.) [Addition to No. 44245.] Length of strip of insulating material supplied to die over short period slightly greater than length of wires supplied during same period so as to apply a slight excess of the material.

48783. Metropolitan-Vickers Electrical Company Limited. Improvements relating to apparatus for detecting vehicles. (January 28, 1952.) Sequence relays sequentially operated in response to successive combinations of switch positions by passage of wheel, the last relay operating only if the preceding relays have operated in correct sequence and then actuating counting apparatus.

48784. A. S. Bhathena. Improvements in or relating to surgical beds or like appliances. [Addition to No. 47216]. The entire upper frame of the bed is made slightly smaller in length and width than the lower frame.

JANUARY 14.

48785. Void.

48786. Dr. Umapati Ganguli. Improved device for preparation of liquid food for babies. Consisting of an assembly of a saucepan and a funnel coated with an enamel of a particular composition.

48787. Automatic Telephone & Electric Company Limited. Improvements in telephone systems. (January 16, 1952.) Sets of gas discharge devices arranged in groups to form a primary switching unit.

48788. Ruhrchemie Aktiengesellschaft. Method and apparatus for carrying out the oxo synthesis in continuous manner. Passing mixture of unsaturated organic compound catalyst as aqueous solution of salt of metal of 8th group of periodic system, CO— and H₂ under elevated temperature and pressure through a tube at velocity preventing component separation.

48789. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in and relating to the extraction of chlorotetracycline. (November 17, 1952.) Acidifying and clarifying the culture medium, treating clarified medium with alkali to form a precipitate, extracting the precipitate with acidified isopropanol, incorporating a chloride in the isopropanolic extract and separating the isopropanolic extract from aqueous layer.

48790. N. V. De Bataafsche Petroleum Maatschappij. Preparations for combating noxious organisms. Comprising as active ingredient derivative of urea, thiourea, isothiurea or hydrazine.

48791. Metallgesellschaft Aktiengesellschaft. Process for the production of oxygen-containing hydrocarbon compounds. (October 31, 1952.) Reacting carbon monoxide and hydrogen at temperatures above 400°C in the presence of catalysts free from compounds of metal of the iron group and containing compounds of metals of the 2nd to 7th group, thereafter causing the participants to react in the presence of metals of the iron group.

48792. Walter Jones & Company (Engineers) Limited. Permanent magnet rotors for electrical machines. (January 22, 1952.) Having pole shoes of soft magnetic material defining at the centre of the magnet system a tunnel adapted to engage a rotor shaft with narrow air-gap.

48793. Badische Anilin- & Soda-Fabrik (I.G. Farbenindustrie Aktiengesellschaft "In Auflösung"). Manufacture of shaped articles from comminuted wood and shaped articles obtained thereby. Consists of impregnating the comminuted wood with low molecular aminoplast

forming condensation products combining it with a binding agent and pressing it.

48794. Mavor & Coulson Limited. Improvements in machines for mining coal and other minerals. Comprising one rotary cutter assembly designated to cut circular bore in a seam, and to traverse the face lengthwise, means for forcing the machine bodily towards the face and means for traversing the machine along the face.

JANUARY 15.

48795. Jogendra Mohan Saha and Nahar Singh Jain. Improvement in or relating to sugarcane juice clarification for the manufacture of white sugar. [Addition to No. 43812.] Juice is heated to any temperature between 50 to 100°C and the filtrate from high alkaline juice is neutralised by phosphoric acid.

48796. Stabilimenti di Ponte Lambro S.p.A. Process for the colouring of fabrics for camouflage purposes. Fabric is coloured by a plurality of colours the proportions of which are so selected that the mixtures all have equal degree of absorption for infra-red rays.

48797. Societe Des Usines Chimiques Rhone-Poulenc. New therapeutically valuable phenothiazine derivatives and processes for their production. (December 2, 1952.) Reacting 8-chlorothiophylline with 10-(3'-dimethylaminopropyl)-chlorophenothiazine.

48798. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of novel heterocyclic compounds. Iso-nicotinic acid halide is reacted with isonicotinic acid hydrazide, one of the two pyridine nuclei being substituted in the 2- and/or 6-position with halogen atom, substituted or unsubstituted hydroxy mercapto or amino group.

JANUARY 16.

48799. G. Chand. Improvements in surgical dressings. Coating with water repellent substance like oils, waxes higher fatty acids or their metal salts or water soluble derivatives.

48800. The General Electric Company Limited. Improvements in or relating to electric motor control systems. (January 17, 1952.) Comprising a speed setting control and wherein a quantity

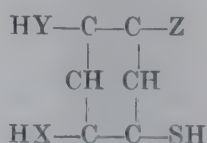
responsive to actual speed is compared with a quantity responsive to the setting of the speed control.

JANUARY 17.

48801. The General Electric Company Limited. Improvements in or relating to electric pulse code modulation signalling systems. (January 18, 1952.) Including means at the transmitter for counting number of pulses at recurrent intervals and sending check signals to the receiver for the purpose of checking whether signals are received correctly.

48802. The General Electric Company Limited. Improvements in or relating to multichannel electric pulse code modulation signalling system. (January 18, 1952.) In which each channel is allotted regularly recurrent time intervals which are interlaced in regular order with and are of same duration as those of other channels, and in each signal channel interval a simple addition binary pulse code group is transmitted in which digit pulses may appear at any of n different time positions.

48803. Cilag Limited. Novel thio ethers and esters and their salts and processes for producing same. Reacting a compound of the formula



wherein X and Y represent oxygen atoms or NH-groups and Z represents a hydrogen atom or a sulphonic acid or carboxyl group, with a reactive ester of an alkanol or aralkanol or with a reactive acyl, aroyl or carbaminoyl derivative.

48804. Caltex (India) Limited. Improvements in and relating to the soldering of metal parts, such as the soldering of seams and joints in the manufacture of metal containers or like articles. Pre-applying solder metal to surfaces and confine and conceal the solder metal between the two surface areas and form a soldered union.

JANUARY 19.

48805. Automatic Telephone & Electric Company Limited. Improvements in automatic telephone systems (January 26, 1952.) Consists of primary and secondary switches, connection being set

up through a switching stage by making all available paths from a primary switch to the secondary switches.

48806. Ateliers Neyret-Beylier Et Piccard-Pictet Etablissements Neyrpic. Apparatus for producing a mechanical movement varying in accordance with the difference between two liquid levels. Two hollow float members partially submerged, mounted on a shaft for rotation as a unit about the axis.

48807. Etablissements NEYRPIC. Improvements in regulating throttle devices for use in hydraulic installations. (March 11, 1952.) A throttle member of circular cross section having a greater diameter than the vertical nozzle opening is supported to swing laterally.

48808. Casablancas High Draft Company Limited. Improvements in or relating to drafting mechanisms for textile fibres. (January 30, 1952.) Having releasable catch means adapted to inter-engage automatically from pre-engaging positions when the arm is lowered against the action of the roller weighting pressure.

48809. Monsanto Chemicals Limited. Process for the preparation of new Phenoxyacetic acid compounds and herbicidal compositions prepared therefrom. (January 23, 1952.) Comprising aqueous solution of 2:4-dichloro-5-methylphenoxy-acetic acid obtained by condensing monochloroacetic acid with 2:4-dichloro-5-methylphenol in alkaline solution.

48810. F. H. Burstall, P. J. Ferrest, N. F. Kember and R. A. Wells. Recovery of gold from cyanide solutions. (January 22, 1952.) The gold is eluted by means of an organic solvent containing an inorganic acid.

48811. Zaidan Hojin Sekitan Sogo Kenkyujo. A method for recovering germanium from coal and the similar materials. Accumulating vitrain or ligneous parts and burning to ash or carbonizing to get oxide and sulphide of germanium.

48812. K. Lenz. Portable liquid container. Consisting of a cylinder having an open end and a closed end and has the closed end indented to form a trough, the open end fitted with an emptying and filling tap.

48813. K. Honda. Drafting device of a spinning machine. Comprising two groups of pair of rollers, one being

arranged in vertical and the other in oblique, and the contact point of the back rollers of the oblique group is placed near the line perpendicular from the contact point of the front rollers of the vertical group.

48814. Urquhart Lindsay & Robertson Orchar Limited. Improvements in self-threading shuttles. Having an angle plate fitting in a chamber and provided with two weft receiving eyes at right angles to each other.

48815. E. Braunstein. A mixture for cold making of ceramic products, also suitable for cold glazing, and products obtained therefrom. Cold making ceramic products prepared from a mixture of Zinc oxide, Magnesium oxide, Sodium borate, Soap stone and which mixture is kneaded in a solution of Zinc chloride, Magnesium chloride and Sodium chloride.

JANUARY 21.

48816. Void.

48817. Void.

48818. Deutsche Gold-Und Silber-Scheidanstalt, vormals Roessler. Method and apparatus for carrying out electrochemical processes. (December 2, 1952.) The volume of diaphragm chamber bears to the area of the diaphragm a ratio not greater than 1:4.

48819. The General Electric Company Limited. Improvements in or relating to electrode holders for arc welding. (January 24, 1952.) [Addition to No. 45044.] Comprising means for angular adjustment of at least one of the surfaces adapted to engage the bared end of one of the electrodes.

48820. Kay & Company (Engineers) Limited. Improvements relating to pipe couplings. (January 25, 1952.) Having an inner pipe supporting lines or sleeve the inner end of which is secured to the sockets.

48821. Robert Haldane and Company Limited, and H. J. Acheson. An improved germicidal soap. (January 29, 1952.) Having 0.2 to 10 per cent. by weight of dihalogenated metaxylenols.

48822. J. A. Bouilliant-Linet. Agricultural machine. A linkage is provided between the working member and a fixed anchor point.

48823. Ciba Limited. Process for the manufacture of new quinoxaline compounds. Substituted quinoxalinium

salts and the corresponding pseudo-bases are made by quaternating a suitable quinoxaline by converting a 2-oxo-di- or tetrahydro-quinoxaline or by other known methods from an ortho-disubstituted ring compound.

48824. Ciba Limited. Process for the manufacture of Diphenyl-Thioureas. Reacting para substituted compounds of the formula $R_2C_6H_4X$ with para substituted compounds of the formula $R_3C_6H_4Y$, X and Y being substituents known to be convertible into the thiourea grouping $-NH-C-NH-$

M
S

48825. Ciba Limited. Manufacture of 1 (3) -alkoxyphenyl-3 (1)- alkylphenyl-2-thioureas. Reacting compounds $R_2C_6H_4X$ and $R_3C_6H_4Y$ so that the thiourea grouping $-NH-C-NH-$ linking

S

the two phenyl residues is formed and if necessary converting R_2 and R_3 into the desired groups.

48826. A. Friedr. Flender & Co. Permanent-magnetic coupling. Wherein coupling halves are provided with a wreath of permanent magnets, the wreaths being alternately provided with north and south poles having the same pole pitch.

48827. Alen & Hanburys Limited, Boots pure Drug Company Limited, The British Drug Houses Limited and The Wellcome Foundation Limited. Improvements in preparations of insulin, (January 31, 1952.) Reacting in solution insulin and polyamino acid having more than 8 amino acid residues per molecule.

48828. Unilever Limited. Improvements in or relating to soap compositions. Wherein 50 per cent. by weight of soap is derived from unsaturated soap forming acids in admixture with alkaline adjuncts.

JANUARY 22.

48829 S. A. Mehta. Improvements in or relating to an apparatus for inflating bicycle tyres. The driving wheel when operated in the reverse direction will operate a sprocket engaged with the driving chain to move a shaft and crank which in turn will move the piston of a pump.

48830. F. Kallay. Improvements in or relating to files. Suspended file forming nest for other files as control card

and each nested file has pocket for the same for a note to be made on removal.

48831. Schering Corporation. X-ray contrast agent and process for preparing same. Meta-hydroxybenzaldehyde is condensed with a lower aliphatic acid and tri-iodinated, the aliphatic bond of the cinnamic acid formed is saturated by a reducing agent.

48832. Robert Bosch GMBH. Improvements in centrifugally operated phase alteration couplings between a pair of shafts. The return spring is mounted between its pivotal pin and a projection.

48833. Void.

JANUARY 24.

48834. The Singer Manufacturing Company. Blind-stitch sewing machine. Skip-stitch mechanism adapted for stitching together a plurality of plies of material and means whereby ridge-former periodically raised and lowered.

48835. The Singer Manufacturing Company. Work-table mechanism for blind-stitch sewing machines. Work-table mechanism having provision for micrometer adjustment of normal elevation of the work-table.

48836. Harry Ferguson Research Limited. Improvements in or relating to vehicle axle and suspension assemblies. (January 25, 1952.) Compensating linkage having pivotal connection with chassis and stub axle which is given oppositely swinging movement to cause the point of contact move substantially vertically relative to chassis.

48837. The Crookes Laboratories Limited. Improvements in and relating to colloidal preparations containing calcium. (January 25, 1952.) The stability of the preparation containing calcium salt of a fatty acid is improved by the addition of a non-ionic surface active agent.

48838. Void.

48839. Sudhir Lal Mukherjee and Albert David Ltd. An Improved process for the manufacture of calcium salt of para-amino-salicylic acid. [Addition to No. 46797.] Reacting amino-salicylic acid with CaO in solution and then saturating the solution with CO₂ and isolating the calcium salt.

48840. Isaac Jackson & Sons Limited. An improved belt fastener for lap joints on transmission belting. (November

11, 1952.) Comprising a concave-convex apertured plate curved transversely to the width of the belt and having edges upturned.

48841. Void.

JANUARY 27.

48842. Thermofrigor (Societe Anonyme), J. Kemeny and B-Ranky. Improvements in or relating to apparatus for vibrating liquids, in particular washing machines. Lines of force of magnetic or electric fields are closed through the walls of the vessel.

48843. Henry Williams Limited and O. M. Williams. Improvements in hand-worked railway switch operating mechanism. (February 6, 1952.) Tension spring anchored to crank arm on operating spindle and supporting member; force exerted by spring keeps one switch blade hard against stock rail; when spindle is rotated torque required for operation decreases.

48844. Societe Des Usines Chimiques Rhone-Poulenc. Process for the preparation of hydroperoxides. Treating certain aliphatic-aromatic hydrocarbons in the liquid phase with oxygen at elevated temperatures in the presence of formaldehyde.

48845. Lock Joint Pipe Company. Improvements in or relating to a mould for fabricating hollow structures. Including a casing, a mould end and means securing said mould end to one end of said casing.

48846. Ciba Limited. New process step in the manufacture of genins from glycosides. Sludge obtained by fermentation of crude steroid saponins is treated with an alkaline earth hydroxide.

48847. The United Steel Companies Limited. Improvements in the manufacture of structural members. (January 28, 1952.) Two structure elements having projecting teeth along one edge are joined by bringing the teeth to a forging temperature and then welding under pressure.

48848. H. C. J. Jackson. Improvements in or relating to tractor-drawn agricultural implements. A gauge wheel pivotally linked and variably adjusted by hydraulic means.

48849. C. D. Patents Limited. Improvements in or relating to absorption apparatus suitable for the manufacture of hydrochloric acid. (January 28,

1952.) Hydrochloric acid gas is absorbed in an absorption tower with inlet and outlet for water and gas.

48850. Void.

48851. Aluminium Laboratories Limited. Method and apparatus for the treatment of finely divided fluidizable, solid material. Maintaining a fluidized bed in horizontal flow and transmitting heat to the material at successive stages in its flow.

48852. A. Meutsch. Rock-drill. Lip angle less than 90° and legs arranged unsymmetrically at opposite sides of a plane, the lip angle and the said plane include an angle of about 5° — 40° .

48853. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to cathodes. Alkaline earth metal compound or the mixture of compounds is melted into the pores of a high-melting point metal body and has a composition such that the reactions with said metal produce only free alkaline earth metal, the melting point of the alkaline earth metal lying between room temperature and the sintering temperature of the metal.

48854. Void.

48855. Algemeene Kunstvezel Maatschappij, Naamlooze Venootschap. Process and apparatus for the production of cylindrical bodies from inorganic or organic fibres and binding agents. (January 23, 1953.) Passing the fibres through a funnel to a rotating mandrel, and introducing a binding agent into the fibre body during the first phase of its formation, the fibre body being moved onward on the mandrel by conveying means surrounding the mandrel.

48856. Void.

JANUARY 28.

48857. S. Iyengar Srinivasan. Improved metal throw-shuttle loom. Pair of metal plates within framework, having slots with notches at upper ends where-in heald-shafts can slide up and down.

48858. Ontario Research Foundation. Clayless refractory products. (February 20, 1952.) Comprising in combination vegetable ash and having silica present in the form of cristobalite and tridymite forms and lime present in an amount of less than 20 per cent. by weight.

48859. Walter Jones & Co. (Engineers) Limited. Improvements in tone generators. (February 6, 1952.) Comprising an assembly of stator cores wound with windings, and a rotor comprising a pair of soft iron circular poles with a controlled leakage gap between them and energised by a permanent magnet magnetised in a direction parallel to the axis.

48860. American Cyanamid Company. Improvements relating to the preparation of cyanamide and cyanamide polymers from urea. (March 4, 1952.) Comprises heating urea in presence of a silica gel catalyst at a temperature of 275 – 650°C at atmospheric pressure.

48861. American Cyanamid Company. Improvements relating to the preparation of leuco indanthrone tetrasulfuric esters. (May 19, 1952.) Oxidising leuco sulphuric ester of a β -aminoanthraquinone with a compound of a metal of atomic number 26, 27 or 28.

48862. Wingfoot Corporation. Improvements in brake assemblies. Pressure actuated switch reduces pressure exerted by brake means when switch is closed.

48863. The Associated Ethyl Company Limited. Improvements in or relating to apparatus for controlling the temperature of freely flowable materials. (January 29, 1952.) A series of tabular passageway are arranged in a side by side assembly which enclose a tubular space and the assembly is heated by electric induction currents.

48864. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of isonicotinic acid derivatives. Reacting isonicotinyl hydrazine with a heterocyclic ketone or aldehyde.

48865. Ciba Limited. Process for producing fast dyeings on anodically oxidized aluminium. The dyestuff used being a cobalt or copper compound of a mono-azo-dyestuff.

JANUARY 29.

48866. Casablancas High Draft Company Limited. Improvements in or relating to drafting mechanisms for textile fibres. (January 30, 1952.) The top roller weighing and carrying arm is adapted for removable engagement on a pivotal mounting at the rear of the mechanisms.

48867. American Flange & Manufacturing Co. Inc. Container closure and combinations. Non-metallic resilient closure plug having closing wall and side wall with securing means and a gasketing portion.

48868. Void.

48869. Purolator Products, Inc. Improvements in or relating to method and apparatus for making a plastic filter unit. Extruded and shaped ribbed plastic ribbon formed into helix when its width lies normal to the helix axis and wider faces in opposed relation and in contact with ribs on adjacent turns.

48870. J. Dionisotti. Rock drill adapted to inject fluid into a bore hole and to return said fluid speedily with the waste produced by the drilling. One tube co-axial with shank to allow fluid under pressure to be injected into the annular space separating the tube from the steel shank.

48871. M. Coplans. Improvements relating to the treatment of senna. [Addition to No. 44762]. The temperature of air is from 150 to 180°C and temperature inside the chamber is between 60 and 95°C.

48872. C. W. Cheney and Son Limited and C. W. Cheney. Slidable bolt fastenings for portfolios, bags and similar travel goods. Providing on the casing of the bolt member opposite spring arms which normally overlie the slot and these are stressed by engaging the hasp-loop with the bolt nose.

JANUARY 30.

48873. Council of Scientific and Industrial Research. Preparation of O, O-diethyl phosphoric acid ester of 4-methyl umbelliferone. Reacting O, O-diethyl chlorophosphate with 4-methyl umbelliferone.

48874. Void.

48875. Void.

48876. Titan Company Inc. Improvements in or relating to a new or improved electrolytic cell of the diaphragm type. Comprising in combination with electrolytic bath an anode, at least two cathodes and porous electrically non-conductive diaphragms in the bath to segregate the solubilization cathode from other cathodes and the anode from each of the cathodes.

48877. O. Lattstad. Footwear and processes and methods for its manufacturing. Comprising an upper of leather and bottom sole of thermo-setting, rubber like plastic in which the lower edge of the upper is needed.

48878. J. A. Crabtree & Co. Limited. Improvements in electric tumbler switches for alternating current circuits. (February 9, 1952.) Roller guidingly supported, is interposed between a cam formation on the dolly and a spring pressed moving contact plate associated with a spring blade formed with a hooked end movable freely over the pivotal end of the moving contact, and disposed between the roller and said plate.

48879. Aktiebolaget Separator. Method and device for the continuous production of margarine and similar fat emulsions. The emulsion is homogenised directly in a continuous flow at a temperature between the melting point and solidification point of the mixture and then cooled.

48880. Western Electric Company Incorporated. Improvements in or relating to inductance devices. (July 26, 1952.) Comprises a shell of magnetic material, a core of magnetic material defining an air gap.

48881. Albion Motors Limited. Improvements in or relating to centrifugal oil cleaners. [Addition to No. 47135.] Uncleaned oil enters and most cleaned oil leaves drum rotated, by reaction of oil jet from nozzle on drum, through axial passages formed in at least one of the bearings.

48882. Dr. Ing. h.c.F. Porsche K.-G. Improvements in independent wheel suspensions of the steered wheels of motor vehicles. Shock absorbers jointed to the ends of longitudinal arm ends and suspended vertically supports the axle journal carriers.

JANUARY 31.

48883. Urquhart Lindsay and Robertson Orchar Limited. Improvements in cop changing mechanisms for looms. (February 1, 1952.) Feeding a new cop automatically when the cop in the shuttle is exhausted during which operation the feeding of the fabric woven is momentarily stopped, means also being provided to bring the loom to a quick standstill should a weft break.

48884. The Mond Nickel Company Limited. Improvements relating to the production of grey cast iron. (February 27, 1952.) Adding to molten cast iron not only magnesium but also rare earth metal in an amount between 0.005 and .02 per cent. by weight of molten iron.

48885. The Mond Nickel Company Limited. Improvements relating to the production of grey cast iron. (October 13, 1952.) [Addition to No. 48884.] Magnesium and rare earth metal are plunged together beneath the surface of the molten iron.

48886. Societe Des Usines Chimiques Rhone-Poulenc. New phenthiazine derivatives and process for their preparation. (December 5, 1952.) [Addition to No. 46531]. 10-(3'-diethylamino-propyl)-1 or 3-chlorophenthiazine is prepared from meta-chloro-diphenylamine by known methods for the conversion of a diphenylamine into an N-dialkyl-aminoalkyl-phenthiazine.

48887. H. C. Bechtler. Process for operating evaporators and evaporating plant for carrying out said process. In operating their film evaporator, the liquid and vapour are conducted in the evaporator in the same direction.

48888. T. F. Holmberg. An improved method of producing pipeless cast ingots. Producing pipeless cast ingots by applying on the top of the casting while hot in a mould, a thermite mixture.

48889. Void.

48890. Y. S. Prakassarao. Andhra Mudralekhini (Telugu Typewriter). Typewriter having a particular key board arrangement.

FEBRUARY 2.

48891. M. A. Chaudary. Improvements in or relating to spinning, winding and dubbing yarn. Comprises in passing the twisted yarn directly to a warp or winding bobbin from the drafting rollers, the warp or winding bobbin rotating about a horizontal axis.

48892. The English Electric Company Limited. Improvements relating to electric control systems. (February 6, 1952). Means for varying D. C. Excitation in accordance with the difference between a quantity dependent on speed of motor and the product of

motor flux and speed, tending to maintain the flux constant.

48893. Thyssensche Gas-und Wasserwerke G.m.b.H. Improvements in processes for the production of useful combustible gases from coking bituminous fuels. The metalliferous coke formed by coking are produced in a shaft furnace with a slopping generator.

48894. Courtaulds Limited. Improvements in and relating to polyacrylonitrile solutions. The solution comprises polyacrylonitrile or a copolymer thereof in aqueous alcohol together with a thiocyanate, LiBr, LiI, NaI or ZnCl₂.

48895. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to new pyrimidine derivatives. Reacting 2-amino-4-halogens-5-(4'-chlorophenyl)-6-ethylpyrimidine with a secondary amine.

48896. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to a new pyrimidine compound. Reacting 2-amino-4-halogens-5-(4' chlorophenyl)-6-ethylpyrimidine with dimethyl amine.

FEBRUARY 3.

48897. C. T. Patira. Improvements in or relating to plastic purses, pouches and the like. The manufacture of purses and the like is characterised in that two lines of welding are effected for joining the sheets at the edges forming a beading between the lines.

48898. S. P. Joshi. Improvements in or relating to table calendars. Support for the pad is a top plate of a box.

48899. S. P. Joshi. Improvements in or relating to blotters. Part of the curved piece of a blotter is made plain, so that blotter rests on that part and the top plate of blotter takes an inclined position.

48900. Bellrock Gypsum Industries Limited. Improvements in and relating to plaster or like cellular panels or like building units and to methods of manufacturing such. (February 4, 1952.) Comprising a plaster facing at one side of the panel integral with plaster cell forming walls projecting from the said facing, a keying formation on said walls and a second plaster facing on the opposite side of the panel.

48901. J. Day & Co. (Derby Works) Limited. Improvements in or relating to high-frequency electric cables. Comprises a pair of tubes and a pair of opposed radial webs, the inner conductor housed in inner tube and the outer conductor housed in outer tube.
48902. (Miss) J. J. M. H. Kotterink and (Miss) M. J. J. Kotterink. Method of manufacturing building elements. Containing sand limestone and a substance having alkaline reaction.
48903. P. Gyorgy, R. Kuhn and F. Zilliken. Improvements in or relating to a method of preparing a foodstuff. Incorporating hydrolyzed chitin to nutritive composition.
48904. Electraulic Presses Limited. Improvements in and relating to hydraulic control valves. (February 16, 1952.) Having emergency stop mechanism which may be operated manually by actuating a push button or automatically when the pressure fails below a predetermined figure.
48905. M. P. Bhargava. Improvements in or relating to processes of digestion of fibrous raw materials for the production of pulp or cellulose. [Addition to No. 45309.] Pre-steaming the raw materials and then bringing, under pressure, the heated cooking with contact with the charge at 162—170°C., at a predetermined initial concentrations, raising the temperature to maximum cooking temperature and maintaining the said temperature for a period optimum for the desired quality of pulp.
- FEBRUARY 4.
48906. The English Electric Company Limited. Improvements in and relating to electric fuse apparatus. (February 15, 1952.) Comprises a fuse base having a pair of parallel fixed contact surfaces and a fuse having a pair of resilient conductors.
48907. The English Electric Company Limited. Improvements in and relating to electrical apparatus. (February 15, 1952.) A fixed member and a movable member one of which is provided with a number of spaced conducting ferrules each having a plug and a cable receiving portion.
48908. Westinghouse Brake & Signal Company Limited. Improvements relating to apparatus for operating railway traffic governing devices by double wire transmission. (February 15, 1952.) The interlocking mechanism is coupled to a member which is released by the clutch device for movement in one direction relative to the lever to operate the interlocking mechanism.
48909. Automatic Telephone & Electric Company Limited. Improvements in telecommunication systems. (February 8, 1952.) Consists of a single cross bar switch having its bridges divided between incoming and outgoing trunks.
48910. Automatic Telephone and Electric Company Limited. Improvements in telecommunication systems. (February 8, 1952.) Two responding devices are associated with each lead at the receiving end and a variable electrical condition is applied to one or both leads at the transmitting end.
48911. Automatic Telephone & Electric Company Limited. Improvements in telecommunication systems. (February 8, 1952.) A marking circuit arranged to receive a plurality of digits designating a wanted line and to control the operation of selector switches.
48912. Automatic Telephone & Electric Company Limited. Improvements in telecommunication systems. (February 9, 1952.) Impulsing circuit comprises an impulse generator and registering means for registering a marking condition.
48913. Automatic Telephone & Electric Company Limited. Improvements in telephone or like systems. (February 9, 1952.) Voice frequency signalling systems employing a converting equipment in which disabling of the equipment is effected in response to loop circuit interruption.
48914. Automatic Telephone & Electric Company Limited. Improvements in or relating to loading coils as used in telecommunication systems. [Divided out of No. 45757, ante-dated to 30th August 1951.] Comprises a plurality of loading coils mounted in a column on a common axis.
48915. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De Saint-Gobain, Chauny & Cirey. Process and apparatus for the production of fibres of glass or other similar mineral materials. (February 2, 1953.) Causing molten glass to flow through nozzles and cooling the latter by means acting directly on the nozzles.

48916. Österreichische Textilmaschinenfabrik G. Josephy's Erben, and Dr. F. F. Polnauer. Improvements in circular looms. Sliding needles or blades enter shed between warp threads after insertion of pick of filling and press filling thread snugly into fell; control of needles and synchronizers of shuttle effected in dependence of position and speed of shedding mechanism.
48917. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of isonicotinic acid derivatives. Iso-nicotinyl hydrazine is reacted with a ketone of the formula $R_1\text{-CO-R}_2$, wherein R_1 stands for a substituted or unsubstituted iso-cyclic group, R_2 stands for an alkyl or phenyl group.
48918. Ciba Limited. Process for the manufacture of new methyl steroids. Preparing 14. methyl steroids having in 3- and 17- or 20-positions free or functionally converted hydroxyl or oxo-group by methods known per se.
- FEBRUARY 5.
48919. Void.
48920. The British Steel Piling Company, Limited. Improvements in the driving and construction of piles. (April 9, 1952.) The casing is closed by a shoe or plug that does not extend beyond the outer surface of the casing.
48921. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of isonicotinic acid derivatives. Iso-nicotinyl hydrazine is reacted with a vinylogous or mono- or disubstituted benzaldehyde and if desired the condensation product is subjected to hydrogenation.
48922. Robert Bosch GMBH. Improvements in sparking plugs with resistance type suppressor fitted in the insulator body. Inner end of the centre electrode in the sparking end extends through a powdery mass and also through a subsequently fused-in plug to provide a direct electric connection with a resistance type suppressor.
- FEBRUARY 6.
48923. Council of Scientific and Industrial Research. Production of single-twisted or twin-twisted steel bars. Bars twisted without axial forces, bars shorten during twin twisting, and bars extend during single-twisting.
48924. Void.
48925. C. H. Booth and H. B. Hardwick. A new or improved cutting or abrading tool. (February 6, 1952.) Cutting tool of tubular form of flexible material wound helically with multiplicity of holes and sharp cutting edges upset from the material.
48926. Radio Corporation of America. Light intensity controlling optical system. Comprising image-relaying apparatus, objective lenses on the object side selectively positionable on the optical axis of said apparatus and light intensity-controlling means located in said apparatus independent of the objective lenses.
48927. Void.
48928. Wurt. Spindelfabrik G.m.b.H. Improvements in jockey pulleys. Belt guide mounted on pulley carrier support directly or indirectly.
48929. Industrial Service and Engineers Ltd. A call-bell. Comprises a housing, a pair of contacts, one of the contacts being spring pressed against the terminal of a battery, the other contact being connected to one end of the coil of the electromagnet, the second contact of the battery being a spring contact, the latter contact being connected electrically to the other end of the coil.
48930. J. Stone & Company (Deptford) Limited. Improvements relating to drives from the axles of railway vehicles to generators and the like. (February 7, 1952.) Void after publication. Shaft of the generator disposed parallel to the vehicle axle driven directly from the axle from a pulley fixed to the end of the axle, i.e. outside the adjacent running wheel.
48931. Hugo Stinnes Verwaltung G.m.b.H. Extrusion machines. Comprising two feed worms with outer worm provided with an inner thread which is also in communication with feed material through apertures in the body of the outer worm.
48932. Hugo Stinnes Verwaltung G.m.b.H. Extrusion machines. Comprising longitudinal grooves in the inner surface of the cylinder but there is no longitudinal groove in the region of the filling zone, and the inner diameter of the cylinder and outer diameter of worm are greater in this region than in other regions.

FEBRUARY 9.

48933. Void.
48934. K. T. Achaya, S. A. Saletore and S. H. Zaheer. Improvements in or relating to the manufacture and purification of fatty acids. A mixture of fatty acids is treated with 1-5 times its weight of urea in saturated solution of 80 per cent. aqueous ethanol, the precipitate is separated from the liquor and the fatty acids are recovered by boiling the precipitate and the mother liquor separately with water.
48935. British Insulated Callender's Cables Limited. Improvements in or relating to insulated electric cables and impregnating compounds therefor. (March 3, 1952.) Consisting essentially of micro-crystalline petroleum wax having a melting point of not less than 80°C. and mineral oil of very low viscosity and low volatility.
48936. Holding Intercito S. A. Apparatus for conveying welding electrodes through a drying stove. Comprising a conveyor means having two endless chains advancing at same speed, links of chains provided with driver members and rolling contact rails, and electrodes propelled by driver members.
48937. Imperial Chemical Industries Limited. Improvements in and relating to melt spinning. (February 19, 1952.) The pump and spinning pack form a unit, said unit be detachable from the spinning apparatus for cleaning and replacement.
48938. Imperial Chemical Industries Limited. Improvements in and relating to the preparation of substituted amines. (March 10, 1952.) Reductively alkylating a compound of the formula $R'R-N-Ar-NH_2$ by hydrogenation in the presence of a ketone to a compound of the formula $R'RN-Ar-NHR^2$.
48939. Imperial Chemical Industries Limited. Improvements in and relating to the preparation of substituted amines. (March 10, 1952.) Reductively alkylating a nitroso compound of the formula $R'RN-Ar-NO$ by hydrogenation in the presence of a ketone to an amine of the formula $R'RN-Ar-NHR^2$.
48940. Nippon Denshin Denwa Kosha. Line fault locating device for communication cables. In which a breakdown voltage together with a welding current are supplied to the circuit to be examined.

48941. S. R. L. Studi E. Brevetti Applicazioni Tessili. Process and equipment for the continuous treatment of yarns. Comprising a processing roller and a plurality of feed rollers located with their axes oblique in respect of the processing roller and set at distances therefrom.
48942. S. R. L. Studi E. Brevetti Applicazioni Tessili. Method and apparatus for the production of yarn cheeses. Instantaneous differences between winding-up speed and feeding rate are compensated by varying the path travelled by the yarn.
48943. C. F. Boehringer & Soehne G.m.b.H. Process for the manufacturing of chlormphenical. (April 30, 1952.) Condensing 1-phenyl-2-halogenopropane, 1, 3-diol with carbonyl compound, exchanging in the product halogen for amino group, introducing in threo-5 amino-6-phenyl-1, 3-dioxane, after dichloroacetylating same, a nitro group in para-position.
48944. Douglas Fraser & Sons Limited. Improvements in silver roll forming machines and yarn and like winding machines. (April 19, 1952.) Cradle formed by parallel members slidable in guideways in machine frame for supporting an arbor, fractional means for restraining the cradle and means to reader frictional means temporarily inoperative.
48945. Schlumberger Well Surveying Corporation. Apparatus for neutron well logging. Including a housing which is passed through a borehole, the housing containing positively charged particles, a target.

FEBRUARY 10.

48946. Inventa A. G. fur Forschung und Patentverwertung. Process for the decomposition of lignin and lignin-containing materials. Treating lignin with hydrogen in aqueous suspension at above 300°C and a pressure above 350 atmospheres in presence of Cu-Cr-O catalyst until 0.9—1.8 mol. of hydrogen per 100 g. lignin have been taken up.
48947. The Plastic and Industrial Corporation Limited. Improvements in or relating to devices for dispensing Liquids. Comprising receptacle having a conduit which has a sleeve at its remote end which can be used as a closure for a bottle.

48948. N. V. De Bataafsche Petroleum Maatschapij. Method and apparatus for contacting a gaseous fluid with fluidized solids. The catalyst particles entrained by the gaseous fluid to the space above the bed of catalyst are separated by a cyclone-type dust separator and discharged by gravity flow into a further fluidised bed the level of which is lower than that of the first mentioned bed.
48949. Westinghouse Brake and Signal Company Limited. Improvements relating to variable load breaking mechanism for railway and like vehicles. (February 13, 1952.) A pivot movable in a path transverse the longitudinal axis of the brake lever which engages the latter as a point between a fixed point and the transmission rod.
48950. Dunlop Rubber Company Limited. Improved cushion tyre. (February 21, 1952.) Comprising a tyre base having an annular metal reinforcement of reticular structure.
48951. Skf Kugellagerfabriken Gesellschaft Mit Beschränkter Haftung. Drawing frame. Rear cap embracing rear portion of bar supporting top rollers and its support rests with inner surface of its back portion on their rear end due to dead weight and action of biasing means.

FEBRUARY 11.

48952. C. K. Menon. Improvements in or relating to grinders. A driven shaft adapted to impart reciprocating motion to a connecting rod transversely disposed to the driven shaft, said connecting rod holding at its end a grinder to impart to the same reciprocation on a grinding bed when the driven shaft is rotated.
48954. Industrial and Financial Association Inc. Improvements relating to a continuous horizontal rotary filters with rocking cells. Wherein rocking cells are of light construction with a rubber like perforated bottom supporting filter cloth with spacing means underneath for filtrate to escape.
48954. Industrial and Financial Association Inc. Process and apparatus for the manufacture of phosphoric acid. Wherein part of reaction magma is received from one reaction zone to vacuum chamber and then returned to a preceding reaction zone in continuous process.

48955. Industrial and Financial Association Inc. Improvements in apparatus for the concentration of liquids which when concentrated contain sticky or incrusting sediments. (February 22, 1952.) Tower with transverse perforated screen having means for adding liquid at top and hot gases at bottom and means for evacuating the products.
48956. E. Buhner. Method of clamping the moulding flask during the operation of drawing the mould from the pattern and apparatus for carrying out the method. Surfaces are provided on the moulding flask and on the clamps of gripping device and when the surfaces make contact they become the holding surfaces without causing any change in the position of the latter.
48957. E. Buhner. Method and apparatus for filling and compacting granular materials into moulding flasks. Moulding flasks are filled with granular material and precompressed by means of a container provided with a bottom closure having an outlet area corresponding approximately to internal cross-section of the mould flask.
48958. H. Morren. Method of making 1-benzhydryl-4-benzyl-piperazines and the products so produced. [Divided out of No. 46725; antedated to February 14, 1952.] Reacting in the presence of hydrogen under pressure and of a catalyst, a benzhydryl-piperazine with benzaldehyde.

FEBRUARY 12.

48959. Void.
48960. E. Boydell & Company Limited. Improvements in or relating to the mounting of a second chassis or other superstructure on a unit construction chassis. (February 15, 1952.) Means for strengthening a unit-construction chassis comprises a U-shaped dead axle assembly consisting of a cross girder member arranged on edge behind the driving axle casing of the chassis.
48961. J. A. Munir. Improvements in or relating to epidiascopes. Comprising housing with internal lights and their reflectors, optical lens for projecting images and means whereby an object whose image to be projected, is positioned at a wall of the housing opposite the lens.
48962. CHINON Gyógyszer-es Vegyszeti Termékek Gyára R. T. (Dr. Kereszty és

Dr. Wolf). Process for the N-acylation of 1-phenyl-2-amino-propanediol (1, 3) and of its derivatives substituted in the phenyl group. Reacting aminodiols with carboxylic acid esters in alkaline aqueous or aqueous alcoholic medium.

48963. Manheim Manufacturing and Belting Company. Improvements in driving belts. Comprising a plurality of links superimposed, secured by fastening elements having at their ends bearing members which are engaged thereto by securing means.

48964. Standard Telephones and Cables Limited. Improvements in or relating to electric switches (February 13, 1952.) With switching means intermediate a first circuit and second circuits, operating in response to the availability of said circuits automatically connecting together to the exclusion of any other second circuit and causes a change in electrical conditions of the interconnected circuits to busy them against other connections.

48965. Pilkington Brothers Limited. Improvements in or relating to furnaces. (February 26, 1952.) Comprising a floating arched roof rested on springers and a series of elements erected alongside of the roof and tank.

48966. S. Singh. Method of and means for manufacturing Cut pile fabric. Weaving cloth with extra warps, removing the cloth from the loom, stretching it on a frame and then cutting the floats by a blade in level with the surface of the cloth.

FEBRUARY 13.

48967. Koninklijke Industriële Maatschappij Voorheen Noury & Van Der Lande N. V. Process for the manufacture of a therapeutically valuable preparation. Containing one or more factors of succin oxydase system of size smaller than 10μ .

48968. Technicolour Motion Picture Corporation. Method of printing pictures by imbibition and film produced thereby. Comprising forming a relief matrix of dyeabsorptive material, absorbing dye into the matrix, bringing the matrix and film into intimate contact and, before the matrix and film are brought together, applying to the surface of the film an aqueous solution of an alkali metal sulphate.

48969. Skf. Kugellagerfabriken Gesellschaft Mit Beschränkter Haftung. Drawing frame. Long bracket supporting front pair of top rollers and extending over top rollers arranged between short brackets supporting remaining top rollers and their axles.

48970. Babcock & Wilcox Limited. Improvements in tubulous vapour generating and superheating units. Means for adjusting flow of gases through superheater tube bank including at least one closure member extending across the by-pass.

48971. Megator Pumps & Compressors Limited. Improvements in or relating to rotary pumps for compressors. (February 15, 1952.) A shoe for use in a rotary pump or compressor moulded of two or more parts.

48972. The Khatau Makanji Spinning and Weaving Company Limited. Improvements in or relating to the production of coloured organdie or parchmentising effects on textile materials. Zinc chloride paste is thickened with cellulosic material which has been dyed with the required colour pigment.

FEBRUARY 14.

48973. Void.

48974. R. Miller. Improvements in or relating to internal combustion engines. Supercharging air cooled and compression ratio in cylinders automatically varied inversely in accordance with load.

48975. T. Livingstone. Apparatus for use in plucking leaf from a tea or like bush. Having comb-like knife element composed of several blades arranged substantially parallel to each other and being disposed at an angle other than 90° to the general direction of the line joining the bases of the blades and forward noses and leading edges of said blades being rounded and the trailing edges being sharp.

48976. American Cyanamid Company. Improvements relating to capsule making machines. (February 12, 1951.) [Divided out of No. 46201; ante-dated to November 14, 1951.] Seal roll having plurality of depressions provided with pressure control duct of such size as to permit displaced volume of capsule sealing operation.

48977. CHINOIN Gyogyszer-es Vegyeszeti Termekek Gyara R. T. (Dr. Kereszty es Dr. Wolf). Improvements in or relating to the preparation of 1-phenyl-2-amino-1, 3-dioxy-propane and derivatives thereof substituted in the phenyl residue. Reacting 1-phenyl-2-halogeno-1, 3, propane diol derivative with ammonia or organic amine.

48978. Imperial Chemical Industries Limited. Improved initiating compositions for use in blasting and military detonators and their production. Composition comprising a major proportion of lead azide and a minor proportion of a normal lead salt of 2:4 dinitroresorcinol.

FEBRUARY 16.

48979. Void.

48980. G. W. Ruparel. Improvements in or relating to door hinges and the like. Having on its outer surface projections and on its inner surface reinforcing tongues.

48981. E. Cvikl and O. Nerath. Improvements in or relating to lattice girders. Triangular lattice girder formed by welding upper and lower chord members with V shaped surrounding frame with a cross stay connecting points of connection of upper chord member and the frame.

48982. Simplex Electric Company, Limited. Improvements relating to electric switches. (February 18, 1952.) Having a pair of terminals to each is connected a contact strip with longitudinally spaced contact carrying portions, thus providing two pairs of opposed spaced contacts between which operate respective movable contact carrying arms connected to two further terminals and cam operable by a dolly to position the arms.

48983. PurOlator Products, Inc.. Improvements in or relating to filter constructions. Comprising a layer of untreated filter paper backed up on downstream side with resin-treated filter paper layer.

48984. Warner-Hudnut, Inc. Improvements in or relating to the preparation of relaxin. Extracting ovaries of pregnant animals, treating with salt and filtering to remove solid material, precipitating crude hormone from the filtrate.

48985. Douglas Fraser & Sons Limited. Improvements in or relating to the production of sliver rolls. (March 1, 1952.)

A condensing conductor is mounted between the drawing rollers and the roll former, without resorting to the use of delivery rollers.

FEBRUARY 17.

48986. Stamicarbon N. V. Process of lowering the acidity of calcium nitrate solutions or melts contaminated with phosphoric acid. Supplying a current of acid liquor or melt and ammonia simultaneously and continuously to a reaction vessel and adjusting the ratio of the two currents so that the pH of the liquor into which ammonia is being introduced is maintained between 4 and 5.

48987. H. Zalcman. Composition and method of removing hair and wool from animal hides and skins. (March 24, 1952.) Aqueous composition containing oxides and hydroxides of calcium, strontium and barium and sulphides and hydrosulphides of calcium strontium, aluminium and barium.

48988. H. Zalcman. Composition and method of removing hair and wool from animal hides and skins. (March 24, 1952.) Aqueous composition comprising water, a source of hydroxyl ions and a source of hydrosulphide ions.

48989. K. M. Doshi. Electrically operated balance for measuring weights. Weight to be measured producing torque in a moving coil placed in a magnetic field, said torque being counter-balanced by an opposite torque produced by passage of current through said coil.

48990. E. A. Meller. Improvements in or relating to gas burning pyrophoric lighters. (July 17, 1951.) [Divided out of No. 45956; ante-dated to October 4, 1951.] Comprises non-return inlet valve means arranged on container, a piercer thereon and cartridge for gas fuel connected to said container.

48991. H. W. S. Churchill and H. Wynmalen. Improvements relating to the construction of windows. [Divided out of No. 46027; ante-dated to October 18, 1951.] The window unit comprises a metal panel having at least one window opening enclosed by a surround said panel having its upper edge and lower edge bent over to form a clipping or hoking portion.

48992. Standard Telephones and Cables Limited. Pulse communication system.

FEBRUARY 18.

- Employing translators between amplitude modulated signals and pulse code signals which translators are adapted for different types of codes.
48993. Standard Telephones and Cables Limited. Microwave coupling arrangements. Including a dielectric sheet containing on opposite sides thereof conductor configurations which on one side may comprise a closed conductor loop and branch conductors disposed laterally thereof at selected points on the loop.
48994. Standard Telephones and Cables Limited. Improvements in or relating to diversity receiving systems for frequency shift signals. (June 17, 1952.) Diversity receiving system for frequency shift signals including means for directly combining voltages representative of the modulations of the signals received over respective transmission paths.
48995. G. J. Liebich Co. Method of and means for preparing surface coating. To predetermined base ingredients supplied in a container having a lid is added a measured quantity of pigment from a flexible and compressible envelope by slitting the envelope, removing the lid, introducing the cut end into the container, gripping the opposite sides of the envelope between the upper edge of the container and the edge of the lid and discharging the pigment into the base ingredients by withdrawing the envelope.
48996. Standard Telephones and Cables Limited. Improvements in or relating to electrical information storage equipment. (May 23, 1951.) [Divided out of No. 47345; antedated to May 22.] Including information storage means, a control circuit, storage space on the storage means allocated to functional control information relating to stored intelligence, the control circuit transmitting functional control information to the allocated storage space and in controlled by information received from the allocated storage space.
48997. Pertrix-Union Gesellschaft mit beschränkter Haftung. Plate cells for galvanic dry batteries and method of manufacturing such cells. Depolariser, electrolyte support and zinc sheet with the conducting layer are enclosed in a two part box preferably of artificial resin and the two parts are each provided with an opening through which the current connections to the neighbouring cells pass.
48998. Switchgear & Cowans Limited. Improvements relating to air circuit breakers, electric. (February 25, 1952.) Comprising deep arc chute enveloping the fixed and moving contacts, a hoop of magnetic material around the chute above the level of contacts, and separate fixed plates of magnetic material transverse to the arc path inside the chute above the level of the hoop.
48999. The General Electric Company Limited. Improvements in or relating to vibratory conveyors and the like. (February 25, 1952.) Electromagnetic vibrator is mounted within a housing consisting of upper and lower parts separated by a small gap extending generally perpendicular to the planes of the leaf spring.
49000. Rhondda Plating Works Limited. Improvements in or relating to methods of and means for anodizing metal articles. (February 26, 1952.) Anodising the article while immersed in an anodic bath to form an oxide layer, scraping the layer formed at portions of the article and repeating the anodizing and scraping cyclically until oxide layer of desired thickness is formed.
49001. M. Shaw. Garments adapted to give the wearer buoyancy. (April 8, 1952.) Incorporating buoyant material enclosed in water-impermeable sheet materials.
49002. Societe Des Usines Chimiques Rhone-Poulenc. New pyrimidine compounds and processes for their preparation. (December 15, 1952.) 2, 4-Diamino-5-(substituted aryl)-6-chloro-pyrimidines are prepared by reacting with ammonia (a) 2-amino-4-, 6-dichloro-pyrimidine (b) 2-acetamido-4-, 6-dichloro-pyrimidine or (c) 2, 4, 6-trichloropyrimidine, each, appropriately substituted in the 5-position.
49003. Societe Des Usines Chimiques Rhone-Poulenc. New pyrimidines and processes for their preparation. (December 15, 1952.) A 5-aryl-aminopyrimidine having a halogen in the 4- or 6-position is reacted with ammonia or primary or secondary amine. Alternatively 2, 4, 6-triamino-5-phenyl pyrimidine may be nitrated to yield 2, 4, 6-triamino-5-(4'-nitrophenyl)-pyrimidine.
49004. Schiess Aktiengesellschaft. Bobbin holder arrangement for spinning machines and the like. Comprising in

combination a creel, a plurality of holding means carried by said creel, the lower ends of the two adjacent holding means being arranged at different horizontal planes spaced from each other by a portion of the bobbin length.

49005. The Wellcome Foundation Limited. Improvements in triazines and their manufacture. (February 26, 1952.) Converting the 5-OH. group of a 3-alkyl-mercapto-5-hydroxy-6-aryl-1, 2, 4-triazine, to a ch'oro group and reacting the resulting 5-chloro compound with ammonia.

49006. The De Laval Separator Company. Refining of fatty oils and fats. Adding phosphoric acid to the crude oil thereafter adding caustic soda to neutralize free fatty acids and separating resulting soap-stock.

49007. Bell Punch Company Limited. Improvements in or relating to calculating and/or accounting machines. (February 19, 1952.) Comprises two sets of bank of keys one set revealing the order depressed and the residue while the other reveals the order and the difference.

49008. Huwood Components Limited. Improvements relating to ejector pumping apparatus. (February 20, 1952.) The jet needle and the cone are interlinked and arranged so that cross-sections of the jet and the throat are simultaneously adjustable from the outside of the apparatus.

49009. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of isonicotinic acid derivatives. Iso-Nicotinyl hydrazine is reacted with a carbonyl compound of the formula 'RO', wherein 'R' stands for an aliphatic or araliphatic alkylidene radical and, if desired, the condensation product is hydrogenated.

49010. A. Meutsch. Improvements in and relating to drilling in rock and other hard substances. Boring rocks by simultaneous rotation and percussion of the drill, the speed of revolution or drill so selected and adjusted in relation to number of blows so that a regular succession of notches are produced.

49011. K. Abildgaard-Elling. A method for the production of p-aminosalicylic acid phenylester. Reacting 4-acetamido-2-acetoxybenzoic acid with an inorganic acid chloride, esterifying with phenol and splitting off the acetyl group by hydrolysis or alcoholysis.

FEBRUARY 19.

49012. B. M. Mistry. Improvements in or relating to mud guards or shields for preventing the splashing of water and/or mud on clothes when walking over wet or muddy ground. Shield extending rearwardly in the region of the heel.

49013. Gestetner Limited. Improvements in or relating to containers for ink and the like. (February 19, 1952.) Formed with its closed end in the form of piston member, readily slidable within the container and in sealed relation with walls thereof.

49014. Standard Oil Development Company. Blended asphaltic compositions. Asphalt containing 0.1 to 20 per cent. by weight of a polymeric vinyl ether compound of the general monomeric formula $R-O\ CH=CH_2$.

49015. W. J. Cruppa and J. B. Rinckhoff. Process of treating badly swelling and caking coals. The coal in pulverised and fluidised form is subjected to a flash oxidation at 675—800°F, cooled and separated from the fluid carrier.

49016. Carbodies Limited. Motor-car body with drop-head. Slam type latch means is connected to be moved by power operated means prior to latter being applied to the head for lowering it.

49017. Secoterm S. A. de C.V. Improvements in or relating to process and apparatus for drying leather. Comprising a drying plate having at one side thereof a smooth surface to receive the leather and heating means associated therewith.

49018. Dr. F. V. Schmoller. Improvements in or relating to flyers for textile speed frames. (September 1, 1952.) Central apertures of twisting members on top of flyer and rotating therewith, formed with spaced symmetrical re-entrant corners to engage roving for increasing its total twist.

49019. Ciba Limited. Process for the manufacture of a new ether. Reacting N-methyl-trimethyl-colchicinic acid with methyl ether forming agent, separating individual isomers and isolating N-methyl-desacetyl-iso colchicine.

49020. Aladdin Industries. Incorporated. Portable hydro-carbon stove. Characterized by a wick comprising a small number of glass fiber strands extending upwardly from a narrow intake orifice

and means for providing super atmospheric pressure in the fuel tank.

49021. Dr. G. Foges. An apparatus for measuring the moisture content of hygroscopic materials. Material is weighed and dried by infra red radiator and reweighed.

49022. Council of Scientific and Industrial Research. A latex composition particularly suited for can sealing purpose. Composed of latex, casein, soluble silicate, albumen, deodorising, bentonite ZnO, gum polyvinyl alcohol, toluene and turkey red oil.

FEBRUARY 20.

49023. Void.

49024. Les Usines De Melle, (Societe Anonyme). Improvements in manufacture of acetone and butyl alcohol. Acetobutylic fermentation of fermentable sugar containing liquor is characterised by adding sterilized milk serum to the liquor, particularly must, before fermentation.

49025. Imperial Chemical Industries Limited. Improvements in and relating to the production of sulphur. (March 5, 1952.) Passing through a retort a mixture of alkaline-earth metal sulphate, carbonaceous material and silica or clay and passing the gases formed, upwardly through a second retort in which a mixture of alkaline earth metal sulphate and carbonaceous material, if desired, with silica or clay is passed downwardly.

49026. Aluminium Laboratories Limited. Improvements in or relating to apparatus for electrolysis of metals. Comprising a main chamber, a supplemental chamber abutting the main chamber, and electrodes disposed in the main chamber transversely relative to the wall between the chambers and molten metal collecting means extending over the cathodes.

49027. "Shell" Refining and Marketing Company Limited. Liquid fuels for internal combustion engines. (February 21, 1952.) Containing alkyl or cycloalkylester of boric or boronic or boric acid having a group of five and no group of twenty carbon atoms.

49028. The Monotype Corporation Limited. Improvements in or relating to record-strip controlled individual-type casting and composing machines and to

photo-typographical composing machines. In which there is mounted on the normal jaw of one of the primary positioning levers a second jaw mounted on the normal jaw and placed in advance thereof and the mechanism controlled from record strip acts to render one or other of these jaws operative on any one of the gauge pins of the series.

49029. Farbenfabriken Bayer Aktiengesellschaft. Process of preparing ice-colours in textile printing and dyeing. By adding salts of halogeno-fatty acids to the printing pastes and using fixed alkalies in quantities of 1 to 2 mols only.

49030. Fairwest (U.K.) Limited. Improvements in or relating to circular looms. (February 22, 1952.) A series of resiliently supported rollers over each of which passes a section of warp threads on their way to shedding mechanism.

49031. Fairwest (U.K.) Limited. Improvements in or relating to circular looms. (February 22, 1952.) The shuttle carries a movable needle or like rod supporting the weft having means to move the needle from its retracted position into an extended position.

49032. Standard Telephones and Cables Limited. Improvements in or relating to multichannel electric carrier current communication systems. (February 22, 1952.) Comprising circuits over each of which are conveyed same series of carrier waves of different frequencies which corresponding side-bands and means for adjusting the phases of the carrier waves such that at one at least of the transmitting and receiving sections, the phases of all the carrier waves of the same frequency are substantially the same.

49033. Council of Scientific and Industrial Research. Treatment of hides for production of gelatin or glue. By treating the hides with an aqueous solution of a halide salt of an alkaline earth metal or alkali metal or a mineral acid prior to liming.

FEBRUARY 21.

49034. Void.

49035. Void.

49036. G. & J. Weir Limited. Improvements in or relating to evaporating

plants. (May 5, 1952.) Heating raw water in the presence of chemical additive to bring about disintegration of bicarbonate and carbonate ions so as to render it non-scale forming.

FEBRUARY 23.

49037. ISO. S.p.A. Motor car with front door. The motor car is provided with an entrance door at the front face of the vehicle.

49038. General Electric Company. Improvements in or relating to insulation. Comprising a sealed container including a pair of spaced flexible walls and a body of filler materials, the filler material being a hard material of low heat conductivity.

49039. The General Electric Company Limited. Improvements in or relating to thermionic valve oscillation generators. (February 26, 1952.) Including a thermionic valve, a first load impedance between a grid-type electrode of the valve and the positive of H. T. source, a second load impedance between the anode and said pole of said source, a regenerative feedback with piezo-electric crystal between a point on the first load and the control grid, output terminals across part of second load, and an automatic grain control circuit fed with voltage from output terminals and applying voltage to the control grid.

49040. Zaidan Hojin Sekitan Sogo Kenkyujo. Method for concentrating and extracting germanium compounds from coals. Washing coal gases with water acidic or basic aqueous solution, concentrating and extracting germanium compounds in conventional ways.

49041. Unilever Limited. Improvements in dentifrices. Containing a water-soluble chlorophyll derivative and a mixture of calcium or magnesium carbonate or phosphate and an insoluble salt of polymetaphosphoric acid.

49042. Plastik Universal Soc.p.Az. Structural toy and model building set. Structural elements with projections and recesses, comprise a prismatic hollow body with at least one projection on one side of the body, the projection being hollow and square in section and its length being greater than half the length of the hollow body.

49043. Farbenfabriken Bayer. Improved process and apparatus for the manufacture of porous and homogeneous plastics having a basis of polyurethane. (December 17, 1952.) Wherein an activator namely one or more cross-linking agents and/or reaction accelerators, is injected into the reaction mixture under-going polyaddition.

FEBRUARY 24.

49044. The Tata Oil Mills Company Limited. Improved extruding machine for soap and other materials. Comprising a pair of screws, one with a left hand helix and the other with a right hand helix, which are mounted closely in mesh with each other in a close fitting barrel and are adapted to be rotated in opposite direction.

49045. Dunlop Rubber Company Limited. Disc brakes for vehicles. (March 6, 1952.) Two or more brake discs axially slidable on and rotatable by a shaft, and a non-rotatable guide member located between each pair of adjacent discs.

49046. Dunlop Rubber Company Limited. Vehicle disc brakes. (March 12, 1952.) A rotatable disc, a pair of wishbone shaped pressure plates axially aligned one on each side and a non-rotatable torque member diametrically across one side of the disc.

49047. The Parker Pen Company. Writing instrument. Ball socket member is formed of glass and the ball is formed of a material as hard as glass.

49048. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of isonicotinic acid derivatives. Iso-nicotinyl halide or hydrohalide thereof is reacted with a hydrocarbon-substituted hydrazine of the formula $R_1-NH-NR_2R_3$ or alternatively a substituted iso-nicotinyl hydrazine of the formula iso-nicotinyl- $NH-NR_2R_3$ is treated with an alkali metal dissolved in lower alkanol and subsequently with an alkyl, aralkyl or alkenyl halide.

49049. Cognate with Appln. No. 47610 dated 7-7-52.

49050. Void.

49051. Cognate with Application No. 49440, dated April 22, 1953.

49052. T. M. M. (Research) Limited. Improved feeding means for machinery operating on textile fibrous material. (May 16, 1952.) Comprising a conveyor,

a cage condenser, a feed trunk, means for delivering material from the trunk at a controlled rate and means influencing the delivery at constant density.

49053. T. M. M. (Research) Limited. Improvements relating to the preparation of blended fibrous materials. (May 16, 1952.) A plurality of preliminary opening machines each arranged to operate upon one of the ingredients of the blend, a blending apparatus including a plurality of gravity-feed trunks connected to and supplied by the said preliminary opening machines.

FEBRUARY 25.

49054. Council of Scientific and Industrial Research and The President, Forest Research Institute and Colleges, Dehra Dun. A process for the treatment of bamboo to further its utilization in the manufacture of pulp, paper, board or the like. Bamboo chips are mechanically disintegrated to cause cleavage between fibres and parenchyma cells.

49055. Void.

49056. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to the purification of gases. (March 7, 1952.) Mixing the impure gas with an amount of hydrogen sufficient to convert all the oxygen present in the initial gas mixture to water, such conversion being carried out over a catalyst at a temperature above 150°C.

49057. The General Electric Company Limited. Improvements in or relating to electric amplifiers. (March 7, 1952.) Comprising an elongated body of semiconductor, an emitter electrodes near one end and a collector electrode near the other end of the body means for causing charged carriers to flow along the body away from said one end and means between the electrodes for amplifying the number of charged carriers flowing along the body.

FEBRUARY 26.

49058. Void.

49059. Kollsman Instrument Corporation. Improvements in or relating to pressure responsive switch. Having a pair of contacts an airtight pressure responsive capsule surrounding the contacts, a housing enclosing the switch, resilient means between the housing and the capsule.

49060. Chemical Construction Corporation. Improvements in or relating to separation of nickel and cobalt from acidic solution. (May 9, 1952.) The acidic solution of the metals is treated with a reducing gas at above 120°C. Said treatment being carried out in three stages so as to effect selective separation nickel and cobalt.

49061. The Dorr Company. Improvements in sewage treatment. Subjecting raw sludge to a thickening operation in a sedimentation thickening zone in the presence of a high volume of liquid

49062. Colgate-Palmolive-Peet Company. Dentifrice preparations. Containing water-soluble polyvinylpyrrolidone.

49063. F. Hoffmann-La Roche & Co Aktiengesellschaft. Process for the manufacture of isonicotinic acid derivatives. Isonicotinyl hydrazine, the nucleus of which may be substituted, preferably 2-alkyl-substituted, is reacted with formaldehyde or with a formaldehyde forming compound.

FEBRUARY 27.

49064. Director, Institute of Agriculture, Anand, Bombay State. A pipe hoe wherein the head piece comprises a wide bored metal tube within the ends of which slide two telescopically adjustable extension pipes carrying prongs for the blades.

49065. J. Warden. Improvements in or relating to end plugs for rolls or reels of paper and other materials. Comprising a cup having a hole in its bottom and an outwardly flanged rim.

49066. National Malleable and Steel Castings Company. Improvements in or relating to a car coupler. Abutment means movable with the coupler engages with car for restricting vertical movement.

49067. E. K. Cole Limited. Escutcheon fixing to the edge of an opening in a panel or the like. (February 28, 1952.) The escutcheon having a front flange and a rearwardly extending wall formed integrals with said flange and adapted to pass through an opening in a panel, bent leaf springs being inserted between the panel and a plurality of lugs provided on the rear surface of the escutcheon wall.

49068. E. K. Cole Limited. Improvements in or relating to audio frequency

- amplifiers. (March 1, 1952.) Negative feedback circuit connected between an anode of an output valve and the low potential end of a volume control potentiometer of an input stage comprises a high pass filter.
49069. British Electricon (London) Limited. Atmospheric moisture precipitation system for use in arid regions. (February 28, 1952.) The apparatus consists of a chamber bounded by a metal plate above of high thermal conductivity.
49070. Glaxo Laboratories Limited. Improvements in or relating to the preparation of esters of penicillin. (February 29, 1952.) Reacting a penicillin salt in an inert solvent with a chloroformic ester; reacting the intermediate compound with a hydroxylic compound or with a primary or secondary amine.
49071. F. Frutiger. Improvements in explosives. Containing either oxygen-rich salts of hydrazine or aliphatic hydrazine derivatives thereof.
49072. F. Titchener-Bloom. Improvements in or relating to level indicators. Combination of a liquid level instrument with an electrical indicator.
49073. F. Titchener-Bloom. Improvements in or relating to fluorescent lamps and to means for reviving fluorescent lamps which have become unserviceable. Device comprising a step-up transformer, a variable ballast in the primary of the said transformer and one or more condensers.
49074. Albion Motors Limited. Improvements in or relating to centrifugal oil cleaners. Comprising a rotatable drum having an axial inlet duct and axial outlet duct and a filtering element interposed between the ducts.
- MARCH 2.
49075. M. A. Idnani and V. G. Walunjkar. Improvements in or relating to manures from wool and hair wastes. Treating hair wastes or wool with 12 per cent. caustic soda followed by re-precipitation of a spongy material by a mineral acid.
49076. The Vibrane Corporation. Devices for propelling flowable substances. Flexible flaccid member in contact with flowable substance displaced alternately in opposite directions out of its plane, the undulations formed having at least one sinusoidal node between displaced portion and the free edge.
49077. Imperial Chemical Industries Limited. Manufacture of substituted 2:2'-dihydroxy-5:5'-dimethyl - diphenylmethanes. (March 11, 1952.) Combining one substituted cresol with formaldehyde in presence of basic catalyst and interacting resulting product with another substituted cresol.
49078. Imperial Chemical Industries Limited. Manufacture of natural and synthetic rubber, rubber articles and rubber latics. (March 11, 1952.) Incorporating a 2:2'-dihydroxy-5:5'-dimethyl diphenyl-methane derivative.
49079. Imperial Chemical Industries Limited. Improvements in or relating to ventless delay electric initiators. (April 21, 1952.) Sheath of delay element is of lead of such thickness as to be melted at same rate as that at which the flame front advances along delay element.
49080. Imperial Chemical Industries Limited. Improvements in or relating to a method of treating a slurry. (May 9, 1952.) Expressing substantial quantity of aqueous portion of slurry prior to subjecting to drying operation.
49081. W. G. Horton. Improvements in and relating to display and like devices. Comprising perforated or slotted plates having at its edges main flanges which has in turn inwardly projected auxiliary flanges.
49082. Cable Belt Limited. Improvements in or relating to conveyors. (March 3, 1952.) Driving means applying power to cable circuits are provided at a point intermediate the head and tail ends of the conveyor.
49083. E. K. Cole Limited. Means for fixing a sheet of glass or the like in an opening in the wall of a cabinet. (March 11, 1952.) Comprising a frame fitting around the contour of the sheet and having a projection extending between the sheet and wall of the cabinet, a leaf spring being forced into a slot provided in the projection.
49084. Chemische Fabrik Schweizerhall. Manufacture of new complex copper, gold or iron salts of carboxylic acid hydrazides. (March 3, 1952.) Cu, Au or Fe salts of carboxylic acid hydrazines are formed by methods known in themselves.
49085. Chemische Fabrik Schweizerhall. New salts of 4-aminosalicylic acid and process of their manufacture. (March

- 3, 1952.) Forming salts of 4-aminosalicylic acid with carboxylic acid hydrazines or their Cu, Au and Fe salts.
49086. Aktiebolaget Svenska Flaktfabriken. A drying device Uneven number of chambers are located on each side of a central chamber and are separated from each other by partitions.
49087. Sydney Smith and Sons (Nottingham) Limited. Improvements in and relating to indicating or recording instruments. (May 29, 1952.) A movable member has a range of movement divided into at least two separate parts and a motion transmitter to transmit motion to the movable member.
49088. Montecatini, Societa Generale Per L'Industria Mineraria E Chimica. Process for the production of urea. Autoclave synthesis from ammonia and carbon dioxide is carried out in the presence of excess ammonia and of a limited amount of additional water, free ammonia and carbonate being separated by rapid pressure distillation from urea and water and condensed at the same pressure by contacting with liquid ammonia and limited amount of water.
- MARCH 3.
49089. Ray-O-Vac Company. Improvements relating to alkaline electric cells [Divided out of No. 47936; ante-dated to August 23, 1952]. A layer of tin interposed between zinc electrode and a terminal in surface contact with the electrode and terminal.
49090. Gordon Warin Limited and G. Warin. A machine for rectifying shuttles for weaving. Comprising a frame having a slide for a shuttle carrying carriage arranged to be reciprocated at right angles to a cutter which is adjustable towards and away from the shuttle.
49091. Patentes Talgo S. A. Improvements in or relating to articulated railway trains. (November 17, 1952.) Wheel steering mechanism comprises connection at one side of the axis of the train between each axle and the car body behind it and connection at the other side between each axle and car body ahead of it.
49092. Dr.-Ing. K. F. Keil. Process for compacting and rapid plastic stiffening or consolidation of various types of earthy materials. Soils compacted by adding 30 per cent. clay or bentonite, 12 per cent. water glass with respect to whole mass and a small amount of hydrating chemical.
49093. Void.
49094. American Home Products Corporation. Improvements in or relating to the culture of the micro-organism *lactobacillus bifidus*. (July 30, 1952.) By adding a substance which may or may not contain a specific growth promoting factor to a growth medium and inoculating with microorganism strain.
49095. Kollsman Instrument Corporation. Improvements in or relating to frequency meter and circuit for producing polyphase output from a single phase input. Having a condenser and resistor connected in series across a single phase voltage source, a first and second electronic amplifier tubes, a two phase synchronous motor, a third and fourth electronic tubes and a magnetic tachometer.
49096. Colgate-Palmolive Company. Apparatus for pressing detergent materials. A die having a working face made of a polymer of high molecular weight.
- MARCH 4.
49097. Howrah Trading Co. Ltd. Braking arrangement for the two rear wheels in a tractor. Brake provided for each individual rear wheel operated through a sleeve rotatably mounted on a shaft.
49098. Howrah Trading Co., Ltd. Means for lowering or raising the plough or the like device in a tractor. A lifting block held within vertical guides to be raised and lowered in by rotation of a screwed spindle.
49099. Howrah Trading Co. Ltd. A device for utilising power from the tractor engine. Pulley and chuck mounted by screws on a flange with a spigot provided on the power shaft.
49100. Void.
49101. Void.
49102. The Stanton Ironworks Company Limited. Improvements in or relating to prestressed concrete pipes or other precast concrete products. (April 22, 1952.) Reinforcement prior to and subsequent to being drawn through reducing die between a set of rollers and constrained to sinuate course; axis of at least one roller adjusted to vary sinusity and tension.

49103. Elektrokemisk A/S. Improvements relating to processes for manufacturing electrode paste. Carbonaceous material is ground before exposure to atmosphere with a liquid, gas or plastic which is miscible with binder.
49104. Babcock & Wilcox Limited. Improvements in or relating to tubulous vapour generators. (March 6, 1952.) Burning the fuel at a temperature at which ash is molten and mixing hot gaseous with recirculated gases cooled by passing over convection heat exchange surface.
49105. Pest Control Limited. Means for introducing chemicals beneath the surface of the soil. (March 5, 1952.) Comprises a downwardly pointed peg carrying a capsule of systemic insecticides, which will disintegrate when said peg is driven into the soil.
49106. Pest Control Limited. A systemic pesticidal agent in a form adapted for handling and storage. (March 5, 1952.) Comprises a closed capsule of a cellulose derivative having free carboxylic groups, said capsule containing a systemic pesticide and a plant growth assistant.
49107. Autoseam (Overseas) Limited. Improved method and apparatus for joining textile fabrics. (March 5, 1952.) By trimming the turnings along the join and heat-sealing the trimmed edges.
49108. Standfast Dyers & Printers Limited. Improvements relating to a method of dyeing textile and like materials. (March 6, 1952.) Impregnating the material with the dye liquor, passing it through an aqueous treating liquor floating on molten metal and then through the molten metal.
49109. Harry Ferguson Limited. Improvements in or relating to seed dispensing mechanism for seed planter (March 6, 1952.) Comprising a base receiving a boundary base ring carrying seed hopper, a drive transmitting coupling detachably connected to rotary seed, seed-plate, seed dispensing formations in said plate, seed picker, pinion operating it rotary driver associated with the coupling and consisting of a bevel gear wheel meshing with driving pinion and picker operating pinion.
49110. Lonza Elektrizitätswerke Und Chemische Fabriken Aktiengesellschaft. Process for the manufacture of bodies of cellular materials, stable in respect of shape and size. (December 10, 1952.) Characterised in after-treatment of cellular thermoplastic body in vacuum of 600 to 30 mm. of Hg. and at 20 to 130°C.
49111. Automatic Telephone & Electric Company Limited. Improvements in telecommunication systems. (March 6 1952.) Includes a crossbar switch having subscribers' lines multiplied to corresponding cross points.
49112. Automatic Telephone & Electric Company Limited. Improvements in telephone systems. (March 8, 1952.) Comprises equipments connected to circuits including a source of timed pulses and a group of relays for cyclic operation of circuits.
49113. Automatic Telephone & Electric Company Limited. Improvements in telephone systems. (March 14, 1952.) Provided with facilities which enable a calling party to set up a local connection while holding a main exchange.
- MARCH 5.
49114. Siemens & Halske Aktiengesellschaft. Improvements in or relating to receiving combiners for teleprinter machines. (January 1, 1953.) Relative movement in the plane of rotation of the seeker produces an axial movement for the actuation of the printing device.
49115. Siemens & Halske Aktiengesellschaft. Improvements in terminal circuit arrangements for signal circuits. (November 17, 1952.) Comprises a reception relay and a transmission switch which short circuits the relay when required.
49116. Studi E. Brevetti Applicazioni Tessili S.r.l. Device for the continuous processing of yarns. Characterized in that adjacent wet processing zones are separated by rings of elastic material which at no point intersect the thread supporting surface.
49117. PERFOGIT Societa per Azioni. Process for the production of delustred structures from polymers. Adding titanium hydroxide gel obtained by hydrolysis of titanium dioxide to starting materials.
49118. Babcock & Wilcox Limited. Improvements in ash disposal means. (March 6, 1952.) Means for sluicing clinker and dust to a settling means for separation and collection of clinker, screening means and pumping means for dust and means for removal of clinker from settling means.

49119. Electraulic Presses Limited. Improvements in and relating to control valves. (March 15, 1952.) Valve member with plurality of ports and passages supplied with servo pressure and movable in relation to several outlets; number and arrangement of ports and passage are such as to open and close the pressure to outlets in predetermined sequence.

49120. Void.

MARCH 6.

49121. James Mackie & Sons Limited. Improvements in stop mechanisms for drawing frames and similar textile machines. Detector member being given a cyclical movement such as repeatedly to engage fibrous material over part of its movement.

49122. B. Fiala-Fernbrugg. Double-piston-internal combustion engine. Pistons operatively connected to same crankshaft throw, each by a link and rocker-lever gearing and main connection rod.

49123. E. Cattaneo. A process and furnace for the treatment of substances subjected to chemical reactions, with solid and gaseous reagents, particularly adapted for the disaggregation of chromite. The solids reactants are kept on a bed and hot gaseous reagents are allowed to creep through it.

49124. Rocla Pipes Limited. Improved means for forming and compacting concrete pipes. Comprising horizontal roller carried on two self-aligning bearings one of which can be swung clear of the roller in combination with means for preventing said roller from excessive tilting.

MARCH 7.

49125. Ward Blenkinsop & Company Limited. Preparation of organic mercury compounds having fungicidal properties and fungicidal products containing the same. (March 10, 1952.) Halogenated phenyl mercury-8-hydroxyquino-lates are prepared by reacting phenyl mercury hydroxide or a salt thereof with a carboxylic acid and 8-hydroxyquinoline having halogen atoms in 5 or 5 and 7 positions.

49126. J. Warden. Improvements in or relating to re-inforced waterproof paper. Consists of two layers of paper wherein

re-inforcing threads of jute or cotton are laid between the layers in a manner extending across the paper in both the crosswise and lengthwise directions.

MARCH 9.

49127. Void.

49128. Imperial Chemical Industries Limited. Improvements in or relating to ventless delay electric initiators for explosives. (May 9, 1952.) Short delay element comprises a cut-off length of fuse including a flexible envelope surrounding a core consisting of a graphite glazed, nitro-cellulose bonded granular mixture of silicon and red lead.

49129. Glaxo Laboratories Limited. Improvements in or relating to the production of penicillin. (March 10, 1952.) Penicillin producing mould is fermented under deep culture conditions in a corn-steep liquor medium containing a thio-sulphate and a penicillin precursor.

49130. Parke, Davis & Company. Production of 1-(nitrophenyl)-2-acylamidopropane-1, 3-diols. Reducing p-nitro-acylamido- β -hydroxy-propiophenone with aluminium alkoxide in anhydrous organic solvent in the presence of aluminium halide.

49131. Chemical Construction Corporation. Improvements in or relating to the production of powdered metals. (May 9, 1952.) Treating soluble salt solution of metal, which forms with ammonia a gas reducible complex, with non-sulfidizing reducing gas at super-atmospheric temperature, pressure and H⁺ concentration within range for metal precipitation.

49132. F. W. Fransson. Improvements in heavy calibre training ammunition. Mouth of small calibre barrel for small arms ammunition spaced at a distance from front opening of hollow body shaped like a round.

49133. Charles E. Frosst & Co. Process for producing dextran products suitable for pharmaceutical and therapeutic preparations. (March 11, 1952.) Subjecting aqueous solution of high molecular-weight dextran to action of H₂O₂ and controlling factors of time, temperature pressure and concentrations to effect depyrogenization and partial depolymerization.

MARCH 10.

49134. Void.

49135. Lacrinoid Products Limited and R. Hagen. Improvements in or relating to the production of thermo-plastic tubing. Passing through a heated tubular guide means towards progressively increasing diameter portion thereof and intermittently expanding with fluid pressure.

49136. Lacrinoid Products Limited and R. Hagen. Improvements in or relating to processes for the production of hollow contractile sheaths of plastic material. Extruding a mass of thermo-plastic material to form a tube, placing the tube in a mould and expanding it, removing the expanded tube and introducing it into a second mould and heating.

49137. Lacrinoid Products Limited and R. Hagen. Improvements in or relating to the production of moulded articles. Extruding a thermoplastic material to form a tube over a nozzle adapted to be supplied with fluid enclosing the extruded tube within a two part mould and creating fluid pressure within it so as to give the tube the shape of the mould.

49138. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to the purification of gases or gas mixtures. (March 21, 1952.) Hydrogen or oxygen is added to the gas mixture in such amount that water can be formed out of it in next stage.

49139. H. C. Andrews. Improvements in or relating to machines for processing tea leaf and like commodities. Tea leaf is passed between two serrated rollers so that the leaf is fed in localised area between the two rollers.

49140. J.M.L. F. Lebreton and G. S. G. Padiou. Improvements in or relating to viscous or solid substances consisting of an oil compound and method for manufacturing same. Heating the oil in the presence of an alkaloid.

49141. Ortho Pharmaceutical Corporation. Preparation of blood fraction for use in Rh testing procedures. By passing mammalian blood serum through cation and anion exchange resins to remove euglobulins, and adding to the solution alkali metal salt of a fatty acid to precipitate denatured globulins.

49142. Neyrpic Portuguesa, Lda. Automatic balance-beam hinge leaf gates

subjected to the impulse of downstream waters. A float connected to the balance-beam type of hinge leaf gate neutralises the effect of the pressure of the tail water on the leaf.

49143. Gestetner Limited. Collapsible bottle. The bottle, the contents of which can be withdrawn by evacuation, comprises a nozzle, side walls and an end closure, the bottom half of the side walls being tough and flexible whilst the top half is relatively resistant to the crushing effect of the atmosphere such that on evacuation the bottom half will be drawn into the top half and turned inside out.

49144. Void.

49145. Void.

49146. Void.

49147. Hand-Skill Looms Inc. Improvements in hand loom. Comprising a frame of light metal tubing, a hollow warp beam frame having end flanges, a friction let off mechanism, a cloth roll, a takeup mechanism and intermittently movable selective mechanism.

49148. Gelsenkirchener Bergwerks Aktiengesellschaft. Briquetting of comminuted materials such as fuels, ores or the like. Mixing the base material with a binding material and shaping the resulting mixture.

49149. Burndept Limited. Improvements in and relating to voltaic cells. (March 20, 1952.) [Addition to No. 45778.] First perforating metal sheet anode and then moulding connector and receptacle upon it from a dry mixture of carbon and polythene, the mixture entering the perforations in the sheet and thereby binding it.

49150. C. D. Patents Limited. A process for the recovery of sulphuric acid and inorganic sulphates from spent dilute liquors. Circulating liquors containing such proportion of crystalline nuclei of size less than 1μ and, at a speed high enough to prevent or reduce crystallisation on heat transfer surfaces.

49151. Void.

49152. Void.

MARCH 11.

49153. V. R. Barve. Soap-powder blower using refilling cartridges. Wherein dispersion is effected by mechanical blow by forced air through connecting tubes with foot-pressure.

49154. Void.

49155. A. F. Duncan. Devices for the balancing of rotating masses. (March 13, 1952.) The rotating mass to be balanced is supported by one or more float members positioned and held by a fluid medium which in turn is held in position by a balanced rotating member by centrifugal force.

49156. Casablancas High Draft Company Limited. Improvements in or relating to drafting mechanisms for textile fibres. (June 16, 1952.) A retaining catch means for a weighting arm having a spring influenced support strut and a co-operating projection, the support strut being adapted for hooked engagement.

49157. Void.

49158. Void.

49159. B. B. Chemical Company Limited. Improvements in or relating to plastic compositions. Comprises a non-drying oil, a resinous material and a filler completely saturated by the oil.

49160. Dunlop Rubber Company Limited. Apparatus for laying inextensible filaments on sheet material. Comprises a bed plate, supports for the filament packages, guides to align filaments, a press with a member of grooves to receive the filaments and means for pressing the member against sheet material passing over the bed plate.

49161. The English Electric Company Limited. Improvements relating to resilient torque transmitting couplings. (April 9, 1952.) Tie bars connected to the coupling members through separate resilient mountings between tie bars and the coupling members.

49162. American Cyanamid Company. Improvements relating to the formation of silica-alumina slurries adapted for conversion into gel type catalysts. (June 30, 1952.) Reacting an acid and an alkali metal aluminate in the presence of hydrated silica gel.

49163. PERFOGIT Societa per Azioni. Filtering device for use in the spinning of synthetic linear polymers. Comprising a plurality of juxtaposed metal plates having a series of passages through which the polymer must flow.

49164. Ciba Limited. Process for the manufacture of new pyridazines. A pyridazine containing a reactive esterified, hydroxyl group in the 3 and 6

positions is reacted with an aliphatic, araliphatic or aromatic alcohol or phenol.

MARCH 12.

49165. Standard Oil Development Company. Improved fractionating tower. A tower has vertically spaced plates in which are large number of punched tabs.

49166. The Wilts United Dairies Limited. Improvements in the production of air-tight packages. (April 7, 1952.) Wherein projections are formed within an open end of a flexible pouch, withdrawing air therefrom and sealing the pouch.

49167. PERFOGIT Societa per Azioni. Process for the manufacture of linear synthetic polymer yarns. Yarn is stretched between two systems of rollers, in the second of which the yarn has a higher speed than in the first to the extent corresponding to the desired drawing ratio and the second device is heated.

49168. PERFOGIT Societa per Azioni. Process and apparatus for the synthesis of polyamides. Applying heat to the lactum in the presence of water at a temperature below 200°C and then polymerising the conversion product so obtained with the addition of no substances other than lactum while allowing the water to escape.

49169. The Khatau Makanji Spinning and Weaving Company Limited. Improvements in or relating to the production of coloured organdie or parchmentising effects on textile materials. Materials are printed with a zinc chloride paste which contains the desired pigment admixed with it.

MARCH 13.

49170. C. A. Parsons & Company Limited. Improvements in and relating to combustion apparatus. (March 25, 1952.) Combustion control apparatus with means wherein a temperature indicator is used in conjunction with a hydraulic relay system.

49171. C. A. Parsons and Company Limited. Improvements in and relating to fluid flow distributing devices. (March 25, 1952.) Fluid flow divided through metering restrictions one of which is used as pilot restriction communicating with regulating restric-

tion, which governs pressure drop across pilot restriction controlling flow through metering restrictions.

49172. P. P. Cherian. Manufacture of bricks and blocks. Consisting of mixing sand and lime and slaking the lime in the mixin a silo, kneading the paste and pressing into blocks.

49173. Void.

49174. Imperial Chemical Industries Limited. Colour photographic images. (March 21, 1952.) Developing an exposed gelatino-silver halide emulsion layer with a primary aromatic amino developing agent in the presence of a colour coupler.

49175. S. D. Kulkarni. Improvements in or relating to "internal combustion engines." Hollowed cam shaft with governor weights controlling fuel pump control lever through push rod disposed in cam shaft, pivoted lever and control rod; skew gear on cam shaft and immersed in oil lubricates associated parts.

49176. A. Suszkin. An arrangement for accurate telemeasurement of water level in distant reservoirs. The device comprises a transmitter and a receiver electrically connected with each other, the transmitter converting the movement of a float to electrical impulses and directing them to a receiver which operates a counter.

49177. A. J. Tagliero. A brassiere. Comprising two rings hingedly connected to each other and provided with extensions and side pieces to which are attached breast covering material and straps respectively.

49178. Miss A. Mohajir, D. S. Datar and S. H. Zaheer. Production of (primary, secondary, tertiary and mixed) sodium, potassium, and ammonium phosphates. Rock phosphate, bone or any other tricalcium phosphate containing material is reacted with corresponding acid sulphate and the resulting primary and secondary phosphates are treated with the requisite hydroxide.

MARCH 14.

49179. Howrah Trading Co. Ltd. Accelerator system in an engine particularly for tractors. Foot operated accelerator lever is connected by three connecting rods of adjustable length, a T shaped lever, and a lever having several adjusting holes.

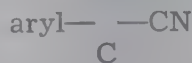
49180. Howrah Trading Co., Ltd. Improvements in or relating to a plough with means for securing same to a tractor. Comprising a main bar, carrying at one end an adjustable lever, a blade fitted at one end of the lever, a supporting link adjustably securing said lever to the main bar, and two connecting rods and a lifting lever connected to the main bar.

49181. Howrah Trading Co. Ltd. Means for connecting a plough or furrowing device to a tractor. Means for detachably securing a plough or furrowing device to the tractors.

49182. Howrah Trading Co. Ltd. Fittings and clamps for the axles in a tractor. Axle is made of I section and is held within a block secured to the chasis.

49183. Howrah Trading Co., Ltd. A bracket and means for mounting the same on a tractor. Bracket of a crank shape is so fitted that the lower horizontal member thereof is secured to the chasis, and the vertical member is in flush with the end of chasis and the upper horizontal member is adapted to hold a platform.

49184. Ciba Limited. Process for the manufacture of arylpyridyl-alkanones. Reacting an alkyl-magnesium halide with an arylpyridylalkane carboxylic acid nitrile of the formula



Pyridyl— — A-N-D in which A is a hydrocarbon residue and D represents two hydrocarbon residues or an alkylene group attached by two valencies to N atom or such an alkylene group interrupted by a hetero atom.

49185. R. C. Reiter. Method for producing salts of penicillin. Dissolving an impure salt of penicillin with an amine in lower aliphatic alcohol and adding to the solution N-substituted alkylene-diamine.

49186. The Carborundum Company. Sanding disc accessory. A circular pad of foam rubber having a layer of pressure-sensitive adhesive on flat faces, the surface being protected from dust by a removable layer with thin protective sheet material.

49187. British Glues and Chemicals, Limited. Improvements in and relating to the separation and/or recovery

of fat and/or fat-like material from organic substances containing it or them in cellular or similar systems. (December 2, 1952.) Subjecting to intense impacts in presence of excess of liquid in which part of raw material is less soluble than in water.

49188. British Glues and Chemicals, Limited. Improvements in extraction of fatty material from raw materials containing the same. (July 17, 1952.) Subjected to intense impacts in presence of excess of liquid having no deleterious effects and separating constituents by centrifuging.

MARCH 16.

49189. Void.

49190. Pulp and Paper Research Institute of Canada. Improvements in or relating to the production of cellulose pulp from plant materials. Wherein plant material is pretreated with steam in a pressure vessel and then immersed in cooking liquor.

49191. Joseph Bancroft & Sons Co. Improvements in or relating to preparation adapted for imparting resin finishes to fabrics. Applying to fabric a solution of a combination of the resin polyvinyl alcohol along with other resins.

49192. Dunlop Rubber Company Limited. Treatment of rubber. (March 26, 1952.) Subjecting the rubber article to stress conditions and then heating it so as to impart a permanent set.

49193. Void.

49194. Jeewanlal (1929) Limited. Improvements in or relating to hinges. Comprising two parts one of which has a hinge pin formed integrally therewith by a rolled portion of said part around which a portion of the other parts is bent to secure the two parts in hinged relation.

49195. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to pyridine compounds. (June 9, 1952.) Condensing guanidine with ethyl-2-(4-chloro-phenyl)-3-pentanone-ate in oleum.

49196. The Wellcome Foundation Limited. Improvements in derivatives of pyrimidine and the method of making the same. (March 25, 1952.) Reacting a β -alkoxy- α -phenylacrylonitrile with a guanidine.

49197. Montecatini, Societa Generale Per L'Industria Mineraria E Chimica. Process and apparatus for the continuous production of aqueous solutions of sodium hydrosulfite from sodium amalgam and gaseous SO_2 . Wherein the reaction of the solution on the amalgam and the absorption reaction of SO_2 take place on distinct contact surfaces in rapid movement.

49198. Boots Pure Drug Company Limited. The production of new benzylphenyl sulphides. (March 17, 1952.) Heating a substituted benzyl halide with phenylthiol.

49199. The Carborundum Company. Silicon nitride articles of manufacture and method of making. Forming article of silicon and firing in atmosphere of nitrogen.

49200. Maschinenfabrik Augsburg-Nurnberg A.G. Ventilating arrangement for rail and road vehicles, which is operative in both directions of travel. The vanes have a substantially elongated "S" formation and have an opening in the vicinity of their outer ends.

MARCH 17.

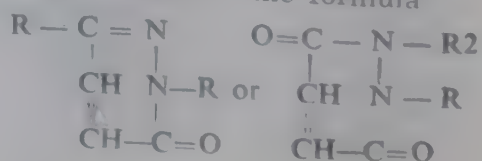
49201. Void.

49202. The Carborundum Company. Abrasive cloth and method of manufacturing. Comprising a woven fabric containing a starch base filling material and a heat hardened synthetic resin filling material and having a layer of abrasive grains attached to the surface by a synthetic resin bond.

49203. H. Krug. An improved combustion chamber in diesel engines. [Addition to No. 48716.] Combustion chamber in the piston is spherical or flatly compressed and the outlet opening of the chamber having a height which is between 15 per cent. and 30 per cent. of the radius of the combustion chamber in the direction of the axis of piston.

49204. Cognate with application No. 47916.

49205. Ciba Limited. Aqueous solutions of medicaments containing solution promoters. Using as solution promotor a pyridazine compound of the formula



49206. Void.

49207. Void.

49208. Void.

49209. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to holders for rotary tools. Comprising a casing, an inlet shaft to be coupled to a machine tool and an outlet shaft movable in an axial direction relatively to casing, an auxiliary shaft coupled to the outlet shaft, and locking means provided between auxiliary shaft and the outlet shaft.

49210. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to cold-gas refrigerating machines having at least two spaces, the volumes of which vary continuously with a substantially constant phase difference. Providing a filter for the regenerator which comprises elements through which at least a portion of the gas which passes is in thermal contact with a medium independent of the cycle.

49211. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a method of producing 2,4,5-trichlorophenoxy-alkanecarbonic acids or salts or esters thereof. 2, 5-dichlorophenoxy alkane carbonic acid or its ester is converted by chlorine into 2, 4, 5-trichlorophenoxy alkane carbonic acid or its ester.

49212. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric incandescent lamps or discharge tubes. Comprising two sealed glass parts, the glass contains at least 65% SiO_2 , at most 12% of bivalent oxides like PbO , BaO , SrO , CaO , ZnO and MgO , of which at least 50% consists of BaO , the glass containing 15-20% alkali oxide of which at least one third consists of K_2O , and containing 0-3% B_2O_3 and at most 5% PbO and 0.5% F .

49213. Imperial Chemical Industries Limited. Improvements in or relating to spinnerets and a method for their production. (May 9, 1952.) Spinnerets have a form geometrically equivalent to a segment of a spherical shell and its boundary edge surface forms a frustum of a cone.

49214. W. H. Smith. Improvements in boiler furnaces. (March 19, 1952.) Comprising power operated means which pushes the clinker or residue from fire-box into ash-pit, and is adjusted

able according to the output of the boiler.

49215. The General Electric Company Limited. Improvements in or relating to arrangements for supplying phase modulated electric oscillations. (March 24, 1952.) Including an oscillation generator, a travelling wave tube and a mixer to which are arranged to be fed both the signal passed by the travelling wave tube and another signal supplied by the oscillation generator.

MARCH 18.

49216. Void.

49217. N. V. De Bataafsche Petroleum Maatschappij. Process for improving motor fuels or components therefor. Heat treatment with hydrogen in presence of a catalyst consisting of 7 parts by weight of molybdenum calculated as MoO_3 in the form of an oxide or sulphide for every 100 parts by weight of alumina.

49218. Soberma. Process and devices for condensing metals to the liquid state. Variable amounts of calories are supplied to the condensation chamber.

49219. Societe Des Usines Chimiques Rhone-Poulenc. A new diamidine salt and process for its preparation. (February 12, 1953.) The salt of symmetrical urea of m-benzoyl-m-amino-p-methylbenzoyl-1-amino-naphthalene 4 : 6 : 8 trisulphonic acid and 1 : 5-di-(4-aminophenoxy)-pentane is prepared by reacting a water soluble salt of the former with a water soluble salt of the latter.

49220. Societe Thermo-Mecanique. Improvements in or relating to thermic apparatus in which hot gases are produced and more particularly boilers for the generation of hot water and/or steam. Combustion chamber is preceded by an auxiliary combination chamber provided with secondary injectors and surrounding a tuyere in which is disposed the principal injector.

49221. The General Electric Company Limited. Improvements in or relating to cold pressure welding. (March 26, 1952.) Comprising in combustion a pair of holder members capable of rectilinear movement, a set of jaws associated with each holder member, each set is formed with a central bore for holding a rod and has a tapered external shape co-operating with a complementary shaped aperture, the arrangement being such that the pressure for clamping

pairs of rods, wires is obtained by movement of the holder members towards each other.

49222. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to circuit-arrangements for use in automatic telephone systems. Dial pulses are received in counting circuit comprising a plurality of gas discharge systems.

49223. Void.

MARCH 19.

49224. Void.

MARCH 20.

49225. American Home Products Corporation. Improvements in or relating to food products. (July 30, 1952.) Adding hog gastric mucin to infant foods.

49226. G. Sain. A machine for shelling corns. Wherein the corns pass through a pair of breaking pinions and then through a pair of roughened shelling discs.

49227. Jyoti Prakash Sircar. An apparatus for pasteurising of milk. The apparatus comprises a can having a float within it of such dimensions that a very small clearance is left between the walls of the float and the can, a drum to hold the can and means for supplying heating or cooling medium to the drum.

49228. Void.

MARCH 21.

49229. Carbodies Limited. Drop head for a motor-car body. (April 24, 1952.) Means brought into operation by drop-head reacting the desired extreme position causes the circuit to be opened.

49230. Huwood Mining Machinery Limited. Improvements in composite rollers, pulleys and the like. Hollow interior contains a store of oil for lubricating the bearing is provided with cavity to hold lubricating grease and sealing means between the body and spindle.

49231. Dunlop Rubber Company Limited. Improvements in or relating to the surface treatment of leathercloth. (March 27, 1952.) Applying to the surface of a leathercloth a gel comprising a polymer of vinyl chloride and a volatile ester of a lower fatty acid.

49232. Dunlop Rubber Company Limited. Rotary moulding machines. (April 1, 1952.) Having stationary electrical induction heating elements extending along the path described by the moulds.

49233. Deutsche Gold-Und Silber-Scheidanstalt, vormals Roessler. Process for removing resin in paper manufacture. Before processing to paper, the cellulose is treated in the presence of alkalis with weak oxygen-releasing agents such as peroxide compounds.

MARCH 23.

49234. Council of Scientific and Industrial Research. Preparation of titanium tetraiodide. By reacting titanium dioxide with aluminium triiodide.

49235. M. A. Chaudary. An improved composition for the treatment of fibres for spinning. Mixture of sulphonated oil and water glass solution containing glycerine, essential oils, calcium chloride, magnesium chloride and cane sugar.

49236. Atkinson's Agricultural Appliances Limited. Improvements in or relating to endless tracks. Endless track comprises a series of separate transversely extending ground engaging band interconnected on their inner side by rubber pads.

49237. Allen West and Company Limited. Improvements in or relating to electromagnetic switches adapted to trip on overload. (April 1, 1952.) Circuit interrupting arrangement including a first and a second contact normally latched together, the second contact being unlatched during overload condition and permitted to dis-engage the first contact and means for pressing the first contact out of engagement with the second contact while the second contact is latched.

49238. Telephone Manufacturing Company Limited. Automatic telecommunication exchange systems and selector switches incorporated therein. (March 28, 1952.) Consists of one selective relay unit in which armature is operated by current flowing in the winding, armature being held by residual magnetism.

49239. Babcock & Wilcox Limited. Improvements in plant for the removal of furnace ash and dust by water sluicing. (March 24, 1952.) In combination a sluice means, collecting means for ash,

means for effecting periodical flow of ash at controlled rate, first and second pumping means for supplying water at low and high pressure, solids separating means for reception of water from the sluice means, dust delivery means.

49240. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture bibenzothiazoles. Reacting 2, 2'-bis-(mercapto), 4, 4'-bis-(hydroxy)-6, 6'-bibenzothiazole in form of alkali salt with lower dialkylamino-alkyl halide.

49241. British Telecommunications Research Limited. Improvements in or relating to regenerative repeaters as used in start-stop telegraph systems. (March 25, 1952.) Including pulse generator for providing pulses to determine instants of sampling, if the stop element is missing at the instants, control equipment for the generator being arranged to maintain operation of the repeater if there is no change in the signal since the initial start condition.

MARCH 24.

49242. Soc. Coll. Adriano Cardella & F. llo. Shuttle-loading device for automatic looms for weaving. Extracting and severing devices coact to first extract the weft cop remain from the shuttle and then to sever the weft thread between the shuttle and cop remain during a single back and forth-movement of the slay.

49243. W. H. Payne. Improvements in and relating to lifting devices for trucks and the like. (August 20, 1952.) Jib arm pivoted between ends to hydraulic ram head and connected by guiding and control means to swivelling collar, cable for load reeved about sheeves and hydraulic supply main ram and hydraulic rams for swivelling.

49244. Studien-und Verwertungs-Gesellschaft m.b.H. Process for manufacture of carboxylic acids. Reacting olifines and carbon monoxide in the liquid phase without addition of water in presence of acid catalysts which contain not more than 10 per cent. of water.

49245. Power Jets (Research & Development) Limited. Bladed rotors. (April 2, 1952.) Void after publication. A number of coaxially axially spaced rotor elements, each made up of at least one sheet metal disc a row of separately

formed rotor blades attached to the periphery of each rotor element and means holding the elements and spacers axially separating them.

49246. W. P. Taylor, Jr. Improvements relating to winding a package of flexible material. Producing relative movements between spindle and source of flexible material to cause this material to shift back and forth along the spindle a whole number of times slightly differing from an integral multiple of one-half number of laying movements of the flexible material around the spindle and varying for short time and at the same angular position of the spindle the relative speed of movement of the spindle and source.

49247. W. P. Taylor, Jr. Improvements relating to packages of flexible material and especially of such materials as wire, yarn, thread, rope, ribbon, tape and the like. Comprising a series of superposed coils of material each layer forming the shape of figure 8, the opposed bights of each coil lying in planes forming an angle with each other.

49248. The Wellcome Foundation Limited. Improvements in and relating to derivatives of pyrimidine and the manufacture thereof. Reacting guanidine with α -formylhydrocinnamic ester or α -alkoxy-methylene hydrocinnamic nitrile.

MARCH 25.

49249. Void.

49250. The English Electric Company Limited. Improvements in and relating to electric fuses. (April 10, 1952.) Comprising a body of insulating material and a fuse element in said body spaced away from the inner walls thereof by arc-quenching material, the fuse element being carried by a separate insulating support.

49251. The English Electric Company Limited. Improvements in and relating to hydraulic turbines. (May 12, 1952.) Of the fixed propeller type or of the feathering runner blade type wherein hydro-brake vanes are held normally retracted within a housing rigidly connected to the turbine runner by springs.

49252. The English Electric Company Limited. Improvements in and relating to hydraulic turbines. (May 12, 1952.) Of the fixed propeller type or of the feathering runner type having pivoted

hydro-brake vanes normally retracted in the runner body and projected therefrom by centrifugal force upon the turbine reaching overspeed.

49253. Magnesium Elektron Limited. Improvements in or relating to magnesium base alloys. (April 22, 1952.) The alloy consists of 4-8 per cent. by weight of Zn, at least 0.5 per cent. of Th., 0.5 to 0.9 per cent. of Zr, the remainder being magnesium.

49254. C. L. Walsh and F. Foulger. Improvements in or relating to the manufacture of cement and cementitious substances. Adding a proportion of pentachlorophenol to the cement clinker.

49255. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to combinations of a substantially cylindrical article with a storage carton closely surrounding the article. Locking extending across the wave direction of corrugated paper or cardboard, the lock members at the locking edge constituted by square extensions and intermediate recesses, and locking being done by inserting the extensions of one edge in the recesses at the opposite edge.

49256. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to petroleum gas ranges or rings. Characterized in that over the auxiliary burner there is a cap for collecting hot gases produced by this burner, the cap having ducts conducting these gases along the mixed-gas ducts of one or more burners.

49257. F. Ashton. Improvements in or relating to fibre drawing. Feeding the fibrous material between drafting rollers while retaining the twist in the fibres upto the point of full elongation.

49258. W. F. DePenning. Improvements in fumigating means. Provided with openings on the walls of the bulb for inserting insecticides or the bulb being so shaped as to provide a receptacle for insecticide.

49259. Standard Telephones and Cables Limited. Improvements in or relating to the manufacture of insulated electric conductors. (Addition to No. 44245.) Conductor and strip of undried insulating paper strip passed through heated die shaped to fold the strip longitudinally around the conductor in at least on turn with over lap.

49260. Standard Telephones and Cables Limited. Improvements in or relating

to voice frequency signal receivers. (June 27, 1952.) [Addition to No. 48492.] Signal receiver as in No. 48492 in which voltage limiter comprises a circuit network connected to a secondary winding.

49261. Standard Telephones and Cables Limited. Improvements in or relating to electrical counting circuits. (August 11, 1952.) Of the type which is responsive to pulses received over a common supply lead, the circuit comprising a coincidence gate circuit between each pair of consecutive tubes in the circuit.

49262. Standard Telephones and Cables Limited. Improvements in or relating to the manufacture of electrical capacitors. (August 19, 1952.) Manufactured by coating insulating material to conductor twice and cutting the double coated conductor.

49263. Void.

MARCH 26.

49264. E. Gretener. High-intensity arc lamp for continuous operation. Heater device kept near and rear of electrode holder so that fusing of electrodes with mating ends which may be inserted into each other and which are covered with binding paste conductively fusible by heating, is effected before they enter into the holder.

49265. National Lead Company. Improvements in or relating to the production of composite pigments. Titanium sulphate solution is divided into two portions, one portion is combined with the slurry of the extender and the mixture boiled to hydrolyze titanium values. The remaining portion of the solution is then added to the mixture to complete hydrolysis of the remaining titanium values.

49266. Imperial Chemical Industries Limited. Improvements in or relating to explosive compositions. (April 21, 1952.) Semi-gelatine and powder explosive compositions containing water soluble inorganic oxygen supplying salt and xylo-galactan.

49267. Electraulic Presses Limited. Improvements in and relating to hydraulic control valves. (April 5, 1952.) Valve spindle or piston adapted to be reciprocated in body bore by fluid pressure for directing pressure fluid flow to further control valve, initially moved by

momentary pressure impulse and then by pressure fluid entering through port opened by valve.

49268. Void.

49269. Walter Urban & Co. Gesellschaft m.b.H. A slide fastener. Wherein a slide designed for the passage of links is positively guided on streps carrying the links to open and close the ball-and-socket joints arranged centrally at the links.

49270. Major A. R. Peters. Improvements in or relating to the locking device of an under lever type of sporting rifle. Under lever connected with an operating link, claw at the upper end when pressed down forces the bolt with an extractor in the recessed portion of its face.

MARCH 27.

49271. S. Abdullah. Improvements in or relating to buckles of the type used for fastening straps of trousers, hold-alls and the like. A metal rim has two hinged bars at its opposite ends, each of the bars carries spikes for biting a strap.

49272. N. V. De Bataafsche Petroleum Maatschappij. Compositions which may be converted into harder products. The composition comprises a polyfunctional glycidyl ether and neutral aliphatic polyhydric alcohols.

49273. Heidenreich and Harbeck. A spinning frame for bast fibres or long leaf fibres particularly jute. Providing a pair of rollers (twisting rollers) adapted to rotate at about the same circumferential velocity as the pair of delivery rollers between delivery rollers and whorl.

49274. Globe Hoist Company. Improvements in or relating to vehicle lifts and method of raising vehicles. Lift member movable to a lowered position within the pit below the level of the floor surface and with a pair of longitudinally spaced transversely extended upright members and a pair of transversely spaced longitudinally extended members.

49275. The English Electric Company Limited. Improvements relating to inductor alternators. (April 18, 1952.) Wherein the rotor core is built up from core-plates having similar angular inaccuracies in the slot pitch and similar

identification means with respect to inaccuracies, said core plates being displaced angularly in the same direction.

49276. Carlo Erba S. p. A. Derivatives of carboxylic acid hydrazides and method of making them. Reacting a carboxylic hydrazide with formaldehyde and sulphurous acid or acid salts thereof.

49277. Gelsenkirchener Bergwerks Aktiengesellschaft. Briquetting of comminuted materials such as fuels, ores or the like. Comprising mixing the base material with a binding agent and shaping the resulting mixture, the binding agent consists of a coal tar pitch and an aromatic compound constituted by three rings.

MARCH 28.

49278. S. Junghans. Process and apparatus for the continuous casting of metals. Introducing molten metal through casting jets in chilled mould open at both its ends.

49279. The British Tabulating Machine Company Limited. Improvements in methods of recording data. (May 11, 1951.) [Divided out of No. 46924; ante-dated March 1952.] Depositing magnetisable material on one or more areas of a non-magnetic record carrier, magnetisable marks being formed by printing.

49280. Void.

MARCH 30.

49281. Dr. S. M. Zveibil. Improvements in or relating to movable awnings. Over-lapping plates held by holders over rigid arms hingedly supported to vertical brackets fixed to wall and swivallable to right or left from normal positions and lockable at any desired position.

49282. B. A. Arakie. Improved smokeless fuel briquettes manufactured from Indian coke breeze. Comprising 80 to 92 per cent. of coke dust, 7 to 15 per cent. of lime and 2 to 5 per cent. of clay.

49283. H. A. Ezuddin. Improvements in or relating to a "Device for manufacturing metal closures having a perforated skirt for bottles and the like containers." Slots are cut at intervals in a metal sheet by turning.

49284. MAK Maschinenbau Klei Aktiengesellschaft. Self-actor mule for spinning animal, vegetable and synthetic fibres and mixings thereof. The carriage driving shaft extending along the entire length of the carriage is directly driven by a control gear and the sprocket wheels are evenly on the shaft.

49285. Council of Scientific and Industrial Research. A process for the recovery of constituent metals from copper base alloy scrap. Chlorinating copper-base alloy scrap to volatilize constituent metals at different temperature levels.

49286. Carlo Erba S.p.A. Process for the preparation of mono-esters in 3 or D-(-) threo -1- p - nitrophenyl-2-dichloro - acetamido-1, 3-propanediol. (April 24, 1952.) Acylating the condensation products of suitable carbonyl derivatives with 1-threo-1-p-nitrophenyl 2-amino-1: 3-propanediol and then dichloro-acetylating the salts with a dichloroacetylating agent.

49287. Void.

MARCH 31.

49288. Sushil Kumar Banerji. An appliance for transplantation. The appliance has a channel shaped ring with a transparent dome shaped cover over it.

49289. Vokes Limited. Filter elements. Consists in securing a thin resilient pad and interposing a second pad between the thin pad and a hard surface.

49290. Void.

49291. National Malleable and Steel Castings Company. Improvements in or relating to a coupler shank and yoke connection particularly for railway vehicles. Shank and yoke connection in which retainer blocks are used and are anchored to the coupler shank for movement with it.

49292. Alegemene Kunstzijde Unie N.V. A method and device for the continuous treatment of a plurality of threads with liquids. In a trough having guiding rollers at the beginning and at the end of the trough, a plate is present at a distance of 1 to 5 mm at the underside of the guiding rollers.

49293. Robert Bosch GmbH. Improvements in fuel injection valves. Difference of core angles of seating surfaces on valve body and needle amount to

at the most 20° and at least 0.5° on the fuel supply and discharge sides respectively.

APRIL 1.

49294. Automatic Telephone & Electric Company Limited. Improvements in contact springsets for use with electrical switching apparatus. (March 29, 1952.) Each lever spring is mechanically supported through an insulating member by a spring of an adjacent unit.

49295. Void.

49296. Engineer-in-Chief, Lighthouse Department, Ministry of Transport, Government of India. A flasher for lighthouse lamps or electrically operated sound signals. Comprising lighthouse lamps or sound signal apparatus connected in series with a transformer and saturable reactor, the D. C. coil of the reactor being connected in series with a rectifier and a cam-operated switch so arranged that when current passes through the D.C. coil the effective reactance of its A.C. coils is diminished.

APRIL 2.

49297. Novo Terapeutisk Laboratorium A/S. A process of preparing crystals of dipenicillin salts of N-substituted alkylenediamines. Alkali metal salt of penicillin is reacted with an alkylenediamine in water wherein there is maintained during reaction a concentration of one or both reactants of at most 10 times the concentration of the reactants determined by the water-solubility of the crystals produced.

49298. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Novel malonic acid derivatives and process for the manufacture thereof. Coumarin derivatives are produced by condensing dialkyl (1'-phenyl-alkyl)-malonate with acetyl salicylic acid halide, and treating the condensation product with cyclising and hydrolysing agents.

APRIL 4.

49299. H. A. Ezuddin. Improvements in or relating to a device for direct threading and sealing of metal caps to bottles and the like containers. Comprises a loose-fit disc to hold a bottle, said disc being fitted to a lift spindle the latter being actuated by a spring loaded lever;

and a rotary shaft mounted above said loose-fit disc.

49300. Smith Kline & French International Co. Method of forming coated pharmaceutical pellets. A medicament is applied to an innocuous core body to form a substantially spherical pellet and delayed action coating is applied thereto.

49301. Technicolor Motion Picture Corporation. Coating optical interference layers. Evaporation from a source and simultaneous deposition on a surface and upon a monitor surface of transparent material and measuring by a photometric device the reflectivity of the layer on monitor surface, the device being calibrated to relate its output to layer thickness of the evaporation allowed until the device indicates a thickness of monitor layer and therefore the layer on the other surface.

49302. American Chemical Paint Company. Process and composition for producing protective and decorative coatings on corrodible metals. (May 9, 1952.) Solution containing hexavalent chromium, fluoride ions and ions containing zirconium, titanium or tin or mixtures thereof but not containing phosphate ions.

APRIL 6.

49303. Void.

49304. Mono Pumps Limited. Improvements in or relating to pumps. (April 15, 1952.) The stator or rotor comprises bristle like elements co-operating with each other to convey particulate materials through the pump.

49305. A. Ch. Fussmann. Improvements in or relating to sports balls. Consists of a rubber plate having a central plug with a self closing opening.

APRIL 10.

49306. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to trimmer capacitors of the kind comprising a tubular dielectric. Comprising a dielectric tube with an outer electrode inner rod-shaped metal electrode which is axially displaceable inside the tube and which is surrounded by an insulating layer at least at the end inside the outer electrode for preventing contact between inner wall of the insulating tube and the inner electrode.

49307. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric discharge tubes. Comprising electrode supported from the bulb by at least one mica centring member whose edge is formed by arcs subtending obtuse angle at the intersections, the largest dimensions of the member at the diametrically opposed intersections of the arcs, prior to introduction into the bulb exceeding by at least 0.5 per cent. the inner diameter of the bulb and tolerances of inner diameter of the bulb being at most $1/3$ per cent.

49308. E. Fougere & Co. Inc. Liquid preparations of therapeutically active substances. (April 24, 1952.) Dissolving a physiologically active substance in a mixture consisting of a polyethyleneglycol derivative of a partial ester of a polyhydric alcohol with a long chain fatty acid or a mixture of these ingredients and adding water to this mixture.

APRIL 6.

49309. Dunlop Rubber Company Limited. Improvements relating to the production of synthetic rubber products. From an aqueous dispersion of a conjugated diene synthetic rubber containing stabiliser which comprises gelling the dispersion in the presence of a acyclic polyalkylene polyamine.

49310. Dunlop Rubber Company Limited. Improvements relating to the production of sponge rubber. Gelling the frothed latex in the presence of an acyclic polyalkylene or a mixture thereof.

49311. Road Machines (Drayton) Limited and W. M. Robb. Improvements relating to monorail systems. Rail with a web portion connecting two cylindrical end portions provide with bracket for inter-connection of rails with supporting pedestal.

49312. Road Machines (Drayton) Limited and W. M. Robb. An improved vehicle for traverse on a monorail system. To improve cornering characteristics the vehicle is tilted inwardly relative to a curve.

49313. G. W. Deodhar. Treatment of tamarind seeds. Heating tamarind seeds with or without water, in presence of one or more of the salts sodium chloride, sodium sulphate, magnesium chloride, magnesium sulphate, potassium

chloride, potassium sulphate and calcium chloride.

49314. G. W. Deodhar. Treatment of tamarind seeds. Breaking the outermost layer of tamarind seeds without exposing the kernels and steeping them for 8 to 15 hours in water or water containing an acid.

APRIL 7.

49315. Rohini Kanta Adhikary. Improvements in and relating to cleaning and copper plating. A metal work-piece is treated with a solution comprising copper sulphate, sulphuric acid, alkali cyanide and chromic acid in water and subsequently with a solution comprising copper sulphate, alkali cyanide, caustic alkali, borax and if desired potassium permanganate in water.

49316. Setright Registers Limited. A new or improved ticket printing and issuing machine. (April 15, 1952.) [Addition to No. 42113.] An improvement of specification No. 42113 wherein is provided a driving member, a releasable driving connection, a printing and feeding mechanism and a rotatable control member.

49317. Associated Pipe Company (Proprietary) Limited. Process and apparatus for the manufacture of pipes and sheets from mouldable substances in which fibrous material is used as a reinforcement. Consisting of a rotary mould and a feeding device extending longitudinally into the interior of the mould.

49318. Sterling Drug Inc. Levo-2, 2-diphenyl - 4-dimethylamino-1-pentanal, and the preparation thereof. (July 22, 1952.) Treating dextro-2, 2-diphenyl-4-dimethylamino pentane nitrile with lithium aluminium hydride and hydrolyzing the product.

49319. American Cyanamid Company. Improvements relating to the preparation of omega [3-(1, 2-dithiolanyl)] aliphatic acids and intermediates thereof (October 27, 1952.) Dithiol acid obtained from ester acid halide by several steps is oxidised with iodine.

49320. The Dow Chemical Company. Improvements in or relating to etching bath. Consists of an aqueous solution of nitric acid and an ester of sulphosuccinic acid and an aliphatic alcohol.

49321. Marconi's Wireless Telegraph Company Limited. Improvements in or relating to automatic radio direction finders. (April 16, 1952.) Comprising two pairs of aerials and a central aerial, two terminating impedance at each of a pair of aerial, a rotary coupling device having stator coupled to the four aerials and a rotatable rotor coupled to the impedances, a receiver fed from central aerial means for producing a reference phase signal, means for comparing said phase signal with the phase of the receiver output and a direction indicator.

49322. S. Takita. Improvements in a fluted bottom roller for a spinning machine. Unit rollers are connected with each other to get some slight and relative rotation.

49323. F. H. Camphausen and E. W. Hiller. Improvements in a seal for a joint between structures. Flexible resilient strip with ribs extending from opposite faces of its central body; ribs increase in width outwardly, body has internal cells permitting distortion of strip by differential movement of adjacent structures in which ribs are embedded.

49324. E. H. Wright. Improvements relating to the production of photographic panoramic parallax stereograms. (April 9, 1952.) Comprising means for causing a basic panoramic stereoscopic image to enter the camera lens and scanning means for dividing the image into a large number of zonal images.

49325. Standard Telephones and Cables Limited. Improvements in or relating to telecommunication exchanges. (April 8, 1952.) There is provided electronic means for identifying and recording the detected signal and means for recording the calling line identity and the fee denoted.

49326. F. L. Smidth & Co. A/S. A method of expelling sulphur from materials containing lime and sulphurous compounds. In burning materials containing lime and sulphurous compounds for producing cement or lime, reducing agents for reducing sulphur compounds are added after the decomposition of the carbonates.

49327. Markham & Company Limited, R. J. Barclay and Boving & Company Limited. Improvements in or relating

- to pelton and other bucket wheels. (April 9, 1952.) Integral portions of a centre part of the wheel form a single support for a bucket and extend along at least part of radial height of the bucket.
49328. Void.
49329. Void.
49330. G. G. Sanders and N. Goodwin. Continuous centrifugal separator. Rotary means mounted in a separating chamber for imparting and maintaining peripheral speed of the fluid.
49331. The British Thomson-Houston Company Limited. Improvements in and relating to the control of winding and like mechanisms. (May 7, 1952.) Cam system controlling motor regulating switches operatively associated with the driven apparatus through lost motion connection so that rotation of cam system effected during predetermined limited movement of apparatus.
49332. Void.
49333. B. S. Dighe. Improvements in and relating to sheet metal vessels of stainless steel. Electroplating stainless steel vessel with copper.
- APRIL 8.
49334. Schering A.G. A process for the manufacture of esters of carbamic acid with tertiary and secondary acetylene carbinols. Tertiary or secondary acetylene carbinol is reacted with unsubstituted carbamic acid halide, or alternatively acetylene carbinol in the form of haloformic acid ester is reacted with ammonia.
49335. K. V. Karantha. Foot support for upper berths in carriages. Foot support consists of a bar weighted on one side and pivoted to one side of the berth.
49336. Cognate with the case No. 48891.
49337. Void.
49338. The General Electric Company Limited. Improvements in or relating to cold pressure welding. (April 25, 1952.) Cold pressure welding a pair of wires by a device having a supporting block having a groove to receive the pair of wires, means to hold the wires together, means for retaining the wires, a pair of oppositely moving welding pins located in bores in the block and lying in a line one on each side of the groove.
49339. Dunlop Rubber Company Limited. Manufacture of rubber products. (April 19, 1952.) Compounding rubber dispersion with an organic thio-compound and an oxidising agent, shaping the dispersion gelling and then vulcanising.
49340. Wegmann & Co. 2-Axle bogies for rolling stock. Axle guides transmit the vertical forces of the four axle bearings to three springs or sets of springs.
49341. Sherritt Gordon Mines Limited. Method of separating metal values from ammoniacal solutions. Treating an ammoniacal solution containing free ammonia, metal sulphides and a compound of sulphur and heating the solution.
49342. Comptoir Industriel D'Etirage Et Profilage De Metaux. Improvements in or relating to the manufacture of hollow metal bodies. Coating heated metal blank with vitreous material and pressing it in a container closed at one end with ram.
49343. Ford Motor Company of Canada, Limited. Motor vehicle chassis. A pair of longitudinally extending side frame members interconnected by a front transversely extending cross frame member and an intermediate cross frame member rearwardly of the front wheel spindles.
49344. The Carborundum Company. Silicon nitride-bonded silicon carbide articles and manufacture thereof. Firing a mixture of silicon carbide and silicon in an atmosphere of nitrogen.
49345. Standard Telephones and Cables Limited. Improvements in or relating to cold cathode gas-filled electric discharge tubes and switching circuit comprising it. (April 10, 1952.) Comprising an electric discharge tube having a cold cathode and two anodes and means for establishing a transmission path across the gap between the two anodes by discharges between the said cathode and the respective anodes.
49346. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of alkyl-piperidiones. Reacting below 70°C. 1-methyl-2:4-dioxo-3:3-dialkyl tetrahydropyridine with formaldehyde and catalytically hydrogenating the reaction product.
49347. Void.
- APRIL 9.
49348. V. S. Natarajan. Method of and means for manufacturing tiles and particularly flooring tiles. Wherein a pair

of tiles facing each other rib to rib and extruded together as a single unit.

49349. Void.

49350. K. Simon. Device for taking of specimens of subsoil for testing purposes. Comprising withdrawal connecting piece with exchangeable cutter and with at least one cavity in the zone of core suitably connected with overground for receiving coolant.

49351. Dyckerhoff & Widmann Kommanditgesellschaft. Improvements in or relating to railroad ties. [Addition to No. 46342.] Two bearing bodies, central part of smaller section rounded at least on lower side and single longitudinal steel bar extending through the three parts and tensioned after hardening of concrete, all forming a non-articulated tie.

49352. Stamicarbon N. V. Method of preparing nitrating acids. By dissolving crystalline (NO_2^+) (HS_2O_7^-) in conc. HNO_3 .

49353. Council of Scientific and Industrial Research. Construction of floors. Floor formed on plunger piles and in contact with ground which being allowed to sink transforms floor into suspended structure supported by the piles.

APRIL 10.

49354. Void.

49355. Council of Scientific and Industrial Research. An improved process for the production of electrolytic manganese metal. Electrolysing a solution containing manganese sulphate, ammonium sulphate, sulphur dioxide and sulphuric acid in electrolytic cell divided in cathode and anode compartments, the temperature is kept at $20^\circ\text{--}35^\circ\text{C}$, the concentration of manganese being 80 gms per litre.

49356. Void.

49357. Void.

APRIL 11.

49358. B. V. Samsi. Improved process for refining vegetable oils and the like. Vegetable oils containing free fatty acids are treated with soap or soap stock before or during their refining treatment with alkali solution.

49359. Void.

49360. Void.

49361. E. Gretener. Apparatus for the transmission and reproduction of colour

television images. Wherein colour component signals related to three reproduction colors are formed at the pick-up apparatus and are transformed continuously into four signals which represent the white content and the three colour residues and from these four signals four images are formed at the receiver apparatus and are superimposed in register.

49362. Void.

APRIL 13.

49363. Sasi Kanta Chakravarti. Spring action foot-press flush valve for urinals. Water-connection is established and flush-water flows in the urinal pan as long as the user is on the foot-rest and presses the knob thereon.

49364. Council of Scientific & Industrial Research. The Manufacture of adhesive tapes. Applying on one side of a tape an anchor coat comprising a mixture of rubber latex and a resin and a second sticky coat.

49365. N. V. De Bataafsche Petroleum Maatschappij. Composition of matter capable of being cured to a resinous product. The process is characterised in that a glycidyl polyether of a polyhydric phenol is mixed with a 2-alkenyl-oxy benzene.

49366. Coal Industry (Patents) Limited. Improvements in belt conveyors. (April 15, 1952.) Belt supported on cables by cable engaging heads each provided with three or more jaws.

49367. E. Shipton & Company Limited. Machines for blowing bottles and other hollow articles from organic plastic materials. Comprising change over means for selectively feeding the plastic material in a semifluid state through an annular space between inner and outer tubes.

49368. F. B. Harley. Improvements in or relating to releasable coupling devices or buckles for straps, tapes and the like. Characterized in that surface of gripping edge and/or auxiliary anchorage has in it a number of holes.

49369. F. B. Harley. Improvements relating to releasable fastenings. A body portion having a notch to receive a bar, forked retaining catch and a locking detent serving automatically to lock the retaining catch.

49370. J. A. Eastwood. Shearing machine for tea. Tea is cut between a pair of toothed grooved rollers.

49371. The English Electric Company Limited. Improvements in and relating to discharge regulators for hydraulic plants. (May 9, 1952.) Wherein a stationary guide body of asymmetrical shape about the axis of discharge pipe faces it from narrow end.
49372. Wuerttembergische Spindelfabrik G.m.b.H. Holders and weighting supports for top rollers of drawing frames in spinning machines. Weighting supports embody a holder with built-in weighting means for the top rollers of the frame.
49373. H. C. Patel. Improvements in or relating to crushing machines. The bracket holding the movable jaw is turned inwardly towards the axis of the crushing zone such that the pin from which it is suspended has its centre lying within the zone formed by the extension of the crushing zone towards the pin.
49374. F. Osborne, and S. P. Kinney Engineers, Inc. Improvements in method of and apparatus for producing light-weight slag. Stream of slag is disintegrated into liquid pellets but no fibres are formed and no material cooling of the slag, the moving liquid pellets are transiently and progressively contacted with atomized water to effect an expansion of the slag without cooling.
49375. Organon Laboratories Limited. A new or improved cyclopentanopolyhydrophenanthrene derivative and methods for its production. (October 6, 1952.) [Addition to No. 48538.] Cyclopentanopolyhydrophenanthrene derivative having a free hydroxy group is reacted with β -phenyl propionic acid or a functional derivative thereof.
49376. J. E. Brassington. Improved container for transporting liquids. Providing suction connection closed and opened by a float valve responsive to liquid level therein from which air is exhausted and liquid sucked in under vacuum.
49377. The Carborundum Company. Abrasive wheel and bushing therefor and method of making same. Having a mounted hole therein and a bushing within the hole composed of organic resinous material.
49378. Void.
- (puzzles). Comprising a box inside which are placed certain pieces of particular sizes arranged together in a particular way, one particular one or all of which is or are to be moved to predetermined position or positions respectively in the box, without any piece being raised, jumped or turned and the box being not turned and with one move at a time in any direction in the blank space.
49380. Void.
49381. Morris Motors Limited. Improvements relating to the trimming of motor vehicle roofs. Cars having pressed steel bodies of fixed head saloon type provided with straining means to tauten the head lining.
49382. Morris Motors Limited. Improvements relating to weather-excluders and the like for doors and windows. Sealing element provided with a hinge like connection to an attachment portion of flexible material which is integral with sealing element.
49383. American Patents Corporation and A. Ferretti. Improvements relating to processes for stretching artificial filaments and fibres of proteins. Artificial filaments of protein are subjected to slow progressive stretching over rollers in conjunction with treatments in aqueous saline baths.
49384. Braunschweigische Maschinenbauanstalt Aktiengesellschaft. Apparatus for and a method of clarifying the raw juices of cane sugar. Mixing while conveying juice and lime from opposite ends of container through series of intercommunicating double-zoned chamber and introducing saturation gas therein at predetermined points.
49385. W. H. R. Behrens. Improvements in or relating to internal combustion engines. Waste heat withdrawn directly by cooling medium directly from interior of each cylinder before beginning of working stroke.
49386. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to permanent magnets and method of manufacturing them. Particles of magnetic powder composed of crystals of magneto-plumbite structure of at least one compound MO, Fe_2O_3 , (M=Ba, Sr or Pb) and in a state of division adapted to favour a (BH) max. value of more than 2.3×10^6 are united to form a magnetically anisotropic body

APRIL 15

49379. Ishwari Das and Dharam Das. Recreative and educative indoor games

and heated to a temperature between 1150°C and 1350°C.

49387. Bomford & Evershed Limited. Improvements in or relating to attachments for vehicles for traversing heaped up material along the ground. (April 28, 1952.) Mounting for blade embodies means responsive to the resistance to movement of blade along the ground.

49388. Morris Motors Limited. Improvements relating to weather-excluders and the like for doors and windows. (May 8, 1952.) To one of the hinge like limbs the beading is rooted whilst the other limb is clamped by U shaped spring clips.

49389. Technicolor Motion Picture Corporation. Pressure roller mechanism for cinematographic films and other moving webs. Comprising a frame with means carrying the roller at one end and a bearing at the other end, a shaft in the bearing, having on opposite sides a pair of narrow longitudinal surfaces spaced apart slightly less than the diameter of the bore, the diameter of the shaft intermediate said surfaces being less than diameter of the bearing, whereby the frame and roller may tip transversely of the path of the web while being restrained from swinging edge-wise of the web.

49390. Road Machines (Drayton) Limited, and W. M. Robb. Improvements connected with power driven vehicles for traverse upon a monorail system. Means whereby brakes are applied automatically upon the vehicle reacting predetermined point on the monorail system.

49391. Dunlop Rubber Company Limited. Improvements in or relating to apparatus for plying yarns. Two supports for let-off yarn packages, a rotatable hollow spindle for plying the yarns together, said spindle having two radially directed passages each adapted to guide a yarn to a plying point within the spindle.

APRIL 16.

49392. K. V. Karantha. Foot support for access to upper berths in carriages. Counterweight pulls up rod with foot support to an unobtrusive position when not in use.

49393. The English Electric Company Limited. Improvements in and relating

to door catches. (May 6, 1952.) Wherein the arrangements is such that the exposed portion of the push button normally present a continuous flush surface with the escutcheon plate.

49394. V. Bumba. Manufacture of building material. Formed from a homogeneous mixture of fibrous material mixed with limewater, cement and mica or asbestos powder.

APRIL 17.

49395. Dr. Ing. Kramadiswar Dutt. Improvements in or relating to structural elements and structures built thereof. Flat tile with wedge shaped ridges, a ledge on opposite sides, and a cross rib.

49396. E. A. Agnew. Solar engine. Basin receiving liquid from reservoir through differential pressure conduit and heat transmitting dome for basin comprising flat sheets transmitting solar rays to evaporate liquid in basin.

APRIL 18.

49397. Void.

49398. Morris Motors Limited. Improvements relating to weather excluders and the life for doors and windows. V-shaped sealing strip bonded to establish a hinge connection with a U-shaped attachment strip.

APRIL 20.

49399. Void.

49400. M. Floro. Machinery for defiber-ing husks and particularly coconut husks. Arranging a set of rotary scrapers and endless gripping conveyors holding coconut husks in a manner that the scrapers coat with gripping conveyors to defiber husk.

49401. Electrical Products (Colne) Limited. Improvements in stop motions for drawing, gilling or other similar machines. A counter weighted pivoted yarn guide actuating a bar to make or break an electric circuit controlling a stop motion on breakage of yarn or silver.

49402. Dr. S. Siddiqui and M. N. Ahmad. Improvements in and relating to desulphurisation of coals. Subjecting to superheated steam in presence of alkaline catalysts like NH_3 and NaOH .

49403. Dr. S. Siddiqui. A new process for the recovery of coal resins with simultaneous partial desulphurisation of the coal. Subjecting to action of superheated steam at 200-330°C.
49404. Telephone Manufacturing Company Limited. Improvements in or relating to electromagnetic relays. (April 24, 1952.) L-shaped frame having a core in the short arm and lying parallel to the longer arm, a winding on that arm and an armature pivoted on the frame.
49405. The Ahmedabad Textile Industry's Research Association, H. V. Udupa and P. C. Mehta. Improvements in and relating to cellulose (finishing) solutions for cotton or rayon fabrics or the like. Modifying cellulose to a degree of polymerisation of between 60 and 250, dissolving the modified cellulose in sodium zincate solution containing excess sodium hydroxide, the degree of polymerisation of the cellulose and the ratio of cellulose to sodium zincate being such as to ensure that not more than 2 parts in 7 of the cellulose remain in suspension.
49406. British Insulated Callender's Cables Limited. Improvements in apparatus for the winding of wire on reels. (May 12, 1952.) Wire is guided so as to make contact with coil on the reel at a point which is 180° in advance of the point of application of winding, and that the wire at the first contact travels through a short arc alongside the last turn.
49407. Deutsche Gold-Und Silber-Scheidanstalt, vormals Roessler. Process for the production of finely divided oxides. Mixing gases which together burn to form water, with volatile metal or metalloid compound and causing the mixture thus formed to react in burner flame.
49408. Godrej and Boyce Manufacturing Company Limited. The improvements in or relating to door latches or locks. Which incorporates a locking device to automatically lock the shot latch bolt when the latter is retracted by pressure on its head and then released.
49409. Cable Belt Limited. Improvements in or relating to conveyor belts. (April 22, 1952.) Rubber belt embedded with textile reinforcing material having also embedded therein a series of transversely extending resilient metal rods.
49410. E. Negishi. Centrifugal spinning machine. Comprising means for sucking sliver into a yarn guide tube and delivering into a rotating pot, an empty bobbin on the yarn guide tube.
49411. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of aromatic aminoketones and salts thereof. Reacting an alkali metal salt of a hydroxyphenyl styryl ketone with a haloalkane and if desired hydrogenating the reaction product.
49412. Petrix-Union Gesellschaft mit Beschränkter Haftung. Galvanic stack battery. Disposed in insulating casings which are so dimensioned that on compression of the battery the upper edge of each casing touches the bottom of the superjacent casing, the casings being connected together by adhesive.
- APRIL 21.
49413. Void.
49414. The General Electric Company Limited. Improvements in or relating to apparatus of the kind for giving an indication or effecting a control in dependence upon the difference in frequency of two oscillatory electric signals. (April 28, 1952.) Including mixing means for two oscillations, a mainly inductive impedance the voltage across which is proportional to the difference frequency and means to give an indication in dependence upon that voltage.
49415. Westinghouse Air Brake Company. Improvements relating to railway car speed determining and control apparatus. Track divided into several sections, speed measured by timing mechanism the operation of which is restarted upon the entry of leading wheels.
49416. Westinghouse Air Brake Company. Improvements relating to car retarder control apparatus. Comprises a number of control circuits, one for each pressure setting of the retarder and a speed measuring mechanism.
49417. H. W. Burrington. Improvements in or relating to an improved method and apparatus for hydrogenating carbon oxides to produce organic compounds. By flowing through a reaction zone hydrogen and carbon oxide in contact with a catalyst at a velocity such that at least a portion of the catalyst moves in the direction of flow of the gaseous mixture.
49418. E. I. Du Pont De Nemours and Company. Improvements relating to electrical apparatus comprising one or

more electrical conductors and associated insulation, e.g. an electrical capacitor. Apparatus is characterised in that the insulation includes biaxially oriented balanced polyethylene terephthalate film material stretched, from 2.5 to 3.25 its original dimension, in both directions and heat set at 150°-250°C.

49419. Ashley Accessories Limited. Improvements in or relating to snap action electric switches. Movable contact member is pivoted on a cradle which is not engaged directly by the operating member.

49420. Metropolitan-Vickers-Grs Limited. Improvements relating to track braking apparatus. L-shaped support members carrying braking rails on opposite sides of running rails arranged to be moved in horizontal direction with braking surfaces parallel.

49421. C. W. Cheney and Son Limited, and C. W. Cheney. Hinged hasp fastening for attache cases and the like. Comprising an attachment plate, a hasp provided with a staple and a link pivotally connecting the hasp with the plate.

49422. Ciba Limited. Process for the manufacture of di-(p-substituted phenyl)-thioureas. Compounds of the formula $p\text{-R-C}_6\text{H}_4\text{-X}$ and $p\text{-R}_1\text{-C}_6\text{H}_4\text{-Y}$, where R and R₁ stand for an n-butyl or amyl radical or an alkoxyalkyl radical and 'X' and 'Y' are substituents convertible into thio-urea grouping, are reacted together to form the grouping-NH-C(=S)-NH-linking the two phenyl nuclei.

APRIL 22.

49423. P. V. Nathan. Improvements in or relating to fibre boards. Fibrous material are thoroughly dried and mixed with power resinous material and pressed into sheets.

49424. G. G. Patel. Improvements in or relating to centrifugal pumps. [Addition to No. 45552.] Tapered nut threaded on pump shaft and abutting a tapered-bush in casing around shaft prevents leakage of air into casing.

49425. Council of Scientific and Industrial Research. Enamels for wire wound resistors. Comprising 55-58 per cent. PbO, 5-8 per cent. Al₂O₃, 10-15 per cent. B₂O₃, 8-11 per cent. SiO₂ and 12-16 per cent. Colourants.

49426. Sttug Chemicals. Insecticidal preparations. Comprises pyrethrum ex-

tract in an organic carrier solvent to which essential oils of citridora plants and plants of Eucalyptus group.

49427. H. W. Burrington. Improvements in or relating to method of making a solution of high polymers and the solution of high polymers resulting from said method. Dissolving high acrylonitrile polymers in an aqueous mixed brine containing 30 per cent. solvent salt and a lesser amount of non-solvent salt, the total concentration of salt being at least 55 per cent.

49428. H. W. Burrington. Improvements in or relating to new composition of matter especially adapted for use in spinning fibres or the like. Aqueous saline solution of acrylonitrile polymer containing organic peptizing agent therefor.

49429. H. W. Burrington. Improvements in or relating to method of preparing fibres. Saline solution of the polymer is spun first into an aqueous coagulant bath consisting of a brine having a lower concentration of salt than in the spinning solution.

49430. H. W. Burrington. Improvements in or relating to method for making films or filaments. Immersing the coagulated polyacrylonitrile polymer article in an aqueous solution of a water-soluble sequestering agent for the polyvalent metal ion in the salt contained in the coagulated article and then drying.

49431. H. W. Burrington. Improvements in or relating to method of making shaped articles. Reducing salt content of a coagulated polymer (polyacrylonitrile) article by contacting the article with a bed of at least one water soluble ion exchange agent.

49432. The Dow Chemical Company. Improvements in or relating to process of polymerizing acrylonitrile. Polymerising acrylonitrile in an aqueous saline medium containing from 0.02 to 1.0 part by weight of copper ions for each million part by weight of the saline medium.

49433. Coconut Processes, Inc. Improvements in or relating to method of recovering oils from oleaginous meats of nuts, beans, seeds and the like. Pressing the meat to expel the juice, centrifuging the juice before fermentation to yield an oil-containing cream, subjecting the cream to enzymatic action without acid formation and centrifuging it to separate the oil.

49434. A. Bagon. Improvements in or relating to sleepers for railway rails or structural elements for use under similar working conditions. Transverse sections of concrete alternating with interposed transverse sections of elastically compressible material of greater deformability, assembled by longitudinal reinforcement tensioned and fixed relatively at the ends.

49435. Compagnie Internationale Des Pieux Armes Frankignoul, Societe Anonyme. Improvements in or relating to hinged girders. Several longitudinal elements of reinforced concrete connected together by initially tensioned reinforcement; adjacent ends of elements bear on each other through contact members forming hinges located off the axis of reinforcement.

49436. Compagnie Internationale Des Pieux Armes Frankignoul, Societe Anonyme. Improvements in or relating to the manufacture of concrete articles. Part newly removed from mould before hardening locally subjected to compressive stress to modify its shape; pressure maintained till part is sufficiently hard.

49437. C. A. Parsons & Company Limited. Improvements in and relating to heat exchangers. (June 19, 1952.) The hot gases are filtered before the gases enter the matrix and periodically matrix is cleaned.

49438. C. A. Parsons & Company Limited. Improvements in and relating to heat exchangers. (June 19, 1952.) The heat exchange element is formed of a number of cells and each cell has a disc and side walls which defines the channels.

49439. Laminex Company. Intermediate product for use in the manufacture of one-piece collars and method of making said product. Fold-line determining means are attached to, or location of such means is marked on the lining fabric having the contour of the collar, the lining fabric being held fittingly during the treatment at, at least two places defining its location.

49440. Ciba Limited. Process for the manufacture of new halogen pyridazines. [Divided out of No. 47575; ante-dated July 2, 1952.] Wherein 6-hydroxy-2-aryl-3-ozo-hydro-pyridazine compounds are treated with halogenating agents.

APRIL 23.

49441. Council of Scientific and Industrial Research. Improvements in the manufacture of fruit pulps in the form of sheets, slabs, or the like. Adding to the fruit pulp a sweetening agent, heating the pulp, sieving the pulp and then cutting dried pulp into slabs.

49442. Void.

49443. (Miss) Vidya Misra. Improved typewriters and typebodies. Striking a full spaced key carriage moves half space before the impression and also after the impression and striking a half-space key the carriage moves half space.

49444. Allied Ironfounders Limited. Improvements in or relating to the centrifugal casting of metals. (April 25, 1952.) Molten metal from a tundish delivered into a tubular element while the element is rotating, and then discharged into a mould.

49445. Standard Telephones and Cables Limited. Improvements in or relating to electric semiconductor devices. (April 25, 1952.) Mounting a semiconductor on metal plate, forming a metal wire loop, mounting an electrode on the loop, arranging the plate and the loop in parallel plane such that the electrode contacts the semiconductor, filling that skeleton mould with a liquid polymerisable insulating compound and polymerising the compound.

49446. School A. G. Reels for wet processing coils of filamentary material wound thereon. Comprises several cages made of wire, sheet metal plastic or the like and arranged coaxially end to end and disposed so as to be capable of being axially telescoped into each other.

APRIL 24.

49447. G. G. Patel. Internal sealing device for rotating shafts, particularly ship propeller shafts, shafts of centrifugal, rotary and the like pumps turbines, hydraulic motors and the like. Flexible sealing member of double U-shaped in longitudinal section fitted within recess, contacting the recess along outer peripheral surface and the shaft along inner peripheral surface surrounding central passage for shaft.

49448. Void.

APRIL 25.

49449. G. G. Patel. Improved rotors and rotor blades for rotary, hydraulic pumps, motors, pneumatic motors and the like machines. Rotor and blades made wholly or partly of rubber, plastic, leather or like flexible material.

49450. Void.

49451. T. Koppanyi and J. F. Fazekas. Depressant-stimulant compositions for oral administration and method of preparing such compositions. Comprising central nervous depressant and $1\frac{1}{2}$ to 3 times its weight of nervous system stimulant.

49452. H. W. S. Churchill and C. S. Schofield. Improvements in or relating to article-dispensing machines. An operating member movable angularly and adapted to co-operate with a replacement article inserted through an inlet at the top, moves the articles bodily.

49453. Imperial Chemical Industries Limited. New dye-stuffs. (May 9, 1952.) Reacting diazotised 2-amino-4-trifluoromethyl-benzenesulphonic acid with a naphthol sulphonic acid.

APRIL 27.

49454. G. G. Patel. Improved centrifugal or the like pumps. Eye of impeller rotatably sandwiched between cover double J-shape and suction flange rotatably J-shaped and suction flange of double L-shape in cross section.

49455. Bleachers' Association Limited., C. S. Parker and A. Melville. Improvements in or relating to ornamentation of fabrics. (July 2, 1952.) By shrinking the fabric in at least one region by lengthwise compression and superficial restraint, while allowing relative freedom to the fabric in a region adjoining the region being shrunk.

49456. N. V. De Bataafsche Petroleum Maatschappij. Process for the preparation of a mixture of alkyl phenolates and alkyl salicylates having a high content of a polyvalent metal and suitable as lubricant additive. Reacting a mixture of alkali metal salts of alkyl salicylic acids and alkali metal compounds of alkyl phenol with an inorganic polyvalent metal salt.

49457. Chemical Construction Corporation. Improvements in or relating to a method of recovering non-ferrous metals

from solutions containing salts thereof. Prior to gas reduction there is added to the solution an amount of material capable of forming with the dissolved metal a gas-reducible complex and also powdered metal.

49458. British Insulated Callender's Cables Limited. Improvements in the manufacture of electric cables. (April 30, 1952.) The insulation of the cable comprises paper impregnated with a mineral oil physically reacted with a normally oil soluble aliphatic hydrocarbon or a solid ethylene polymer treated by chemical means or radio-active irradiation to bring about carbon to carbon cross linkage in the molecule.

49459. Metallgesellschaft Aktiengesellschaft. Societe Des Acieries De Longwy and E. Burstein. Method of producing coke. Grinding coal with high ash content to size equal to or smaller than that with low ash content, mixing and coking the same.

49460. Wegner Brothers Limited and T. J. Smith & Nephew Limited. Improvements in and relating to skull caps. Having a frontal strip or pad of readily absorbent textile material adapted to be positioned on the forehead of the user.

49461. Laporte Chemicals Limited. Improvements in or relating to the production of anthraquinhydrones, anthraquinols and hydrogen peroxide. (April 28, 1952.) Anthraquinone in solvent mixture is reduced by hydrogen in presence of palladium catalyst.

49462. Laporte Chemicals Limited. Improvements in or relating to the manufacture of catalysts. (April 28, 1952.) Palladium salt is adsorbed on a alumina carrier which is then reduced to palladium metal.

49463. Loporte Chemicals Limited. Improvements in or relating to hydrogenation, and apparatus therefor. (April 28, 1952.) An inner tube is provided inside an outer tube and liquid can flow between bottom of both tubes.

49464. The Carborundum Company. Shellac-bonded abrasive articles and methods of manufacturing the same. Articles such as a grinding wheel comprise a mass of abrasive grains bonded with a material comprising the heat-hardened reaction product of a composition comprising shellac and melamine.

465. R. Fleischanderl. Apparatus for use in mounting wheels on motor vehicles and the like. (December 29, 1952.) A protective sleeve for the threaded stud on the hub with a lever articulatedly connected to one end of the sleeve.

466. Standard Telephones and Cables Limited. Compandor control system for electric pulse communication system. Receiver for receiving transmitted modulated signals and a tone signal, comprising means for detecting distortion in the tone signal and means for utilising the distortion detection to compensate for corresponding distortion in said modulated signals.

467. Standard Telephones and Cables Limited. Improvements in or relating to electric pulse code modulation system. (June 24, 1952.) Comprising means for sampling an electric wave at instants, means for determining its amplitude at each instant, means for generating in response to each sample a group of one or more digit pulses according to a code of two or more elements and means for transmitting the digit pulses.

468. M. I. Qureishi. Improvements in or relating to devices, such as weirs, for controlling flow of fluid. The device consists of a glacis and a diverging construction extending from the crest of glacis the crest and foot of glacis has predetermined curve.

APRIL 28.

469. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electromechanical vibrators. (Addition to No. 47511.) Comprising a hollow magnetostictive member of radially symmetrical formes placed in a polarising field extending parallel to the axis of rotation of said member, a winding provided around an additional ferromagnetic core.

470. American Cyanamid Company. Improvements relating to the recovery of new growth factors or vitamins from aqueous solutions thereof. (November 21, 1952.) Extracting the aqueous solution with a water immiscible hydroxylated organic solvent, separating the solvent phase and reducing its volume.

APRIL 29.

471. Siemen and Halske Aktiengesellschaft. Improvements in or relating to

non-chattering contact arrangements for relays. Rubbing spring surfaces provided with a viscous pasty coating.

49472. Siemens and Halske Aktiengesellschaft. Improvements in or relating to tension band mountings employed for the rotatable part of measuring instruments, recording instruments, indicators or switch gear, more particularly for relay armatures. Stirrup, ring or similar device of measuring instrument or relays is initially tensioned by a spring.

49473. Imperial Chemical Industries Limited. New pyrimidine derivatives. Reacting a malondiamide derivative with formic acid or formamide.

49474. Les Laboratoires Dausse. Improvements in new morphine derivatives and production thereof. Reacting morphine with a halide of the formula $R_1(R_2)-N-CH_2-CH_2-X$ or its hydrohalide.

49475. American Cyanamid Company. Improvements relating to the production of addition products of aromatic compounds and phosphoric anhydride and corresponding aromatic phosphoric acids. By reacting phosphoric anhydride under anhydrous conditions with an aromatic compound free from polar groups, and if desired, hydrolyzing the resulting product.

49476. Monsanto Chemical Company. Improvements in or relating to foundry sand compositions for molds and cores. Comprising foundry sand, clay, water and a polymeric water-soluble polyelectrolyte.

49477. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of a vitamin active powder. Forming an emulsion containing vitamin active material, water, gelatin and/or gum acacia, and sugar, converting the emulsion to droplets and collecting the droplets in a mass of starchy powder.

49478. E. Vallak. Chill moulds for casting steel or other metals. Comprising a charable sinking head box which is composed of porous material.

APRIL 30.

49479. EVG Entwicklungs- und Verwertungsgesellschaft m.b.H. Improvements in and relating to steel reinforcements for reinforced concrete structures. Two longitudinal steel rods of high yield point

are connected with one another by transverse connectors interwelded between the longitudinal rods.

49480. The Wellcome Foundation Limited. Improvements in or relating to the manufacture of quaternary salts of piperazine. By reacting the corresponding tertiary bases with $R''X$ wherein R'' is an alkyl group having 1 to 3 carbon atom.

49481. Oetiker-Motorbremsen A. G. Improvements in and relating to exhaust brakes for internal combustion engines. Closing member freely journaled in closed bores in wall of exhaust duct, connected on exhaust side to means operated from outside to open and close the member.

49482. Nordmark-Werke GMBH. Manufacture of 4-(p-aminobenzenesulphonyl)-amino-pyrimidines. Reacting 4-amino-pyrimidine with benzenesulphonic acid halide using an acid binding agent consisting of a mixture of trimethylamine and another tertiary amine.

MAY 1.

49483. Parke, Davis & Company. Amino acid compounds and methods for producing the same. Reacting an acid addition salt of O-glycyl-(1)-serine or O-glycyl-(dl)-serine with a diazotizing agent to produce O-diazoacetyl-(1)-serine or O-diazoacetyl-(dl)-serine.

49484. Aluminium Laboratories Limited. Improvements in wire or cable fasteners or clamps. (May 2, 1952.) A body made of ductile metal having cable receiving portions each defining an aperture with compressible wall.

49485. James Mackie & Sons Limited. Improvements in stop mechanisms for drawing frames and similar textile machines. (May 2, 1952.) The relative motion causing the engagement of the pivoted detector and the sliver and having a component transverse to the general direction of the travel of the sliver moves the detector to engage an abutment when the sliver breaks and thereby stopping the loom.

49486. D. B. Morton, Senior, D. B. Morton, Junior and G. E. Morton. Improvements in or relating to internal combustion engines. (May 2, 1952.) Engine cylinder removably bedded in frame, located against endwise movement and releasably secured by clamping means.

49487. The B. F. Goodrich Company. Improvements in or relating to a flexible glass fibre and method of making same. A flexible glass fibercoated with metal.

MAY 2.

49488. F. Ch. Unger & Sohn. Roofing plate. Suspension elements at the upper and lower edges shaped as noses, bars or the like.

49489. Void.

MAY 4.

49490. Jai Prakash Gupta. Improvements in or relating to table fans. Provided with a sliding nut, connected to a lever attached to auxiliary vertical spindle, movable forwards or backwards in relation to the axis of the said spindle by means such as a threaded rod with which it is always engaged.

49491. N. V. De Bataafsche Petroleum Maatschappij. Lubricating oil compositions. Containing an aliphatic acid having more than one CXXH-group or an amide or partial ester thereof, a compound containing Y-H group attached to aromatic ring system and compound containing aromatic ring and CZZH group, where X is oxygen or sulphur and Y and Z can also be selenium or tellurium.

49492. Imperial Chemical Industries Limited. Improvements in or relating to the art of delay electric firing of blasting explosive charges and appliances suitable for use in delay electric firing circuits for such charges, in the winning of coal, rock, metal ores and the like. (May 21, 1952.) Arranging an electric firing current to pass through the fusehead of each succeeding detonator by an electrically actuatable delay switch interposed between it and its preceding detonator to permit the electric firing current to pass through said fusehead when a closed circuit is formed by the actuation of the switch.

49493. Imperial Chemical Industries Limited. An improvement in or relating to a re-utilisable blasting apparatus assembly applicable for blasting in coal-mines. (June 23, 1952.) Comprising electrically actuatable heating element wherein at least one of its two electrical lead wires is insulated and passes through a bursting disc forming with it an insulated gas-tight seal and free end.

49494. Void.

49495. Simon-Carves Limited. Improvements relating to medium for sink-and-float ore separators. (May 19, 1952.) Treating magnetic material, other than blast furnace flue dust, by dry magnetic separation process, and reducing the magnetic fraction for use as medium.

49496. British Telecommunications Research Limited. Improvements in or relating to mechanisms for producing step-by-step linear drive. (May 5, 1952.) Movements effected by two electromagnets energised repeatedly at same frequency but with a phase displacement.

49497. Metropolitan-Vickers Electrical Company Limited. Improvements relating to electric storage battery charging. (May 22, 1952.) Charging circuit including main contacts which are closed to connect the battery to a generator, a shunt circuit connected across the main contacts and means to prevent flow of reverse current through the shunt circuit.

49498. N. P. Goss. Porous mold for the continuous casting of metals. Metal is passed through a sleeve having a labyrinth of capillary Pores filled by a lubricant.

49499. Ciba Limited. Proces for the manufacture of formylamino compounds. [Divided out of No. 47610; ante-dated to July 7, 1952.] Treating trimethyl-colchicinic acid or N-methyl-trimethyl-colchicinic acid or its esters with formylating agents and then with reactive esters of methanol.

49500. Void.

MAY 5.

49501. American Patents Corporation. Improvements in or relating to process for increasing swelling and softness of textiles containing artificial fibres of protein. Joining and twisting the artificial protein fibres with other fibres and passing the thus united fibres through one hot aqueous bath.

49502. May & Baker Limited. Improvements in or relating to pyridine derivatives. (May 16, 1952.) Void after publication. An alkyl ester of iso-nicotinic acid is reacted with a reactive ester and with hydrazine or with hydrazine followed by aldehyde or ketone.

49503. British Insulated Callender's Cables Limited. Improvements in and relating to electric cable. (May 12, 1952.) Comprises a mould having a central passage and halical cavity, strip feeding means, heating arrangement for softening the strip.

49504. Cluett, Peabody & Co., Inc. Machine and process for shrinking and finishing woven textile fabrics. A pair of intake feed rolls between which a woven fabric to be shrunk is passed, means for driving said rolls, a moisture conditioner, a stretcher device a heating device, resilient rubber belt, an intake roller and means for tensioning said belt.

MAY 6.

49505. Standard Oil Development Company. Improvements in or relating to silica-alumina catalyst and the process of using them. By mechanically mixing 3-20 weight per cent silical hydrogel with 2-6 weight per cent alumina hydrosol and drying the mixture at least 250°F.

49506. American Flange and Manufacturing Co., Inc. Closure plugs and methods for forming same. Comprising a base, a side wall and an actuating member engaging element consisting of a body portion extending across said base and upwardly extending engaging portions at the ends of said body portion.

49507. Gevaert Photo-Production N. V. Production of photographic multi-colour images. (May 7, 1952.) The photographic material is re-exposed to light during colour development.

49508. J. Nagel. Zip-fastener devices. Two helices are of wires bend into segments of which there are multiples of four per whorl, one of the helices having a smaller external diameter than the other.

49509. Westinghouse Brake & Signal Company Limited. Improvements relating to liquid filled dash pot devices. (June 25, 1952.) A liquid filled cylinder closed at each end by flexible diaphragm and having intermediate its ends an internal transverse partition.

49510. Void.

MAY 7.

49511. Master A. B. Saval. Medicine for the cure of eye troubles. Comprising

surma, greater cardamon charcoal, betel nut, charcoal and honey.

49512. C. M. Sweet. Simple (Hindi and English) high-speed printing telegraph. [Addition to No. 47180.] Rectangular characters encode into horizontal and vertical-element signals, in channels, scanned photo-electrically and recorded in readable forms by oscillographic means.

MAY 8.

49513. B. S. Kalsi. Improvements in or relating to constructional elements, particularly such consisting of slotted metal bars of angle section. (May 9, 1952.) Comprising a metal bar of angular-section having lines of holes in its flanges, holes in one flange at least are arranged so that the flange can be connected to similar flange of a second such element, crossing the first element at right angles, by four bolts located in the corners of a square, wherein holes in one flange at least are arranged in recurring elongated groups.
49514. Dexion Limited. Improvements relating to constructional elements, particularly such consisting of slotted metal bars of angle section. (May 9, 1952.) A metal bar of angular section having lines of holes in its flanges, wherein one flange at least has a pattern of holes such that the flange can be connected to similar flange of a second element, crossing the element at right angles by four bolts located at corners and an additional series of round or elongated bolt holes is provided along the centre line of the pattern of holes.
49516. Dexion Limited. Improvements relating to constructional elements, particularly such consisting of slotted metal bars of angle section. (May 9, 1952.) Metal bar of angular section having lines of holes in its flanges for the insertion of bolts wherein two lines of elongated holes in one flange are transversely spaced apart and from the respectively adjacent edges of the flange by one-third of the width of the flange.
49517. S. I. S. Societe d'Investissements Collectifs. Injection moulding machine.

Consisting of a ram chamber, a pre-plasticising chamber, plurality of strain rods and lower end upper mold supporting platen.

49518. The Plastic & Industrial Corporation Limited. Improvements in or relating to pill boxes or like containers. The closure member is integrally connected to the container by flexible strip.

49519. Void.

MAY 9.

49520. N. K. Gupta. Improved method of aluminizing ferrous metal products. Immersing ferrous products in an electrically heated salt bath under a layer of aluminium functioning as electrolyte and withdrawing after sometime.
49521. Wingfoot Corporation. Improvements in brake housing mounting for single disc brake. Housing and disc relatively movable axially of the disc, guided by spaced means in relative movement.
49522. Wingfoot Corporation. Improvements in resin foam and process. The composition comprises a foamable alkyd resin-organic di-iso-cyanate mixture containing a surface active agent miscible with the mixture and inert with respect thereto.
49523. Patricia Dennis Brassieres, Inc. Bust supporting garment. Having wire stiffening means which comprises a bowed member for each breast cup and a central member connecting the two bowed members.

MAY 11.

49524. Council of Scientific and Industrial Research. Foam glass. Mixing together a pulverized reducing agent and a powdered glass comprising reactive oxygenated sulphur compounds other than sulfates such as sulphites thiosulphates or dissolved gases comprising lower oxides of sulphur such as SO_2 .
49525. Ramapati Ghosh. Improvements in or relating to ratchet draw vice. Consisting of a clamp for holding the conductor wire to be tensioned, a holder connected to the clamp, a rotatable shaft carried by said holder, a ratchet wheel fitted at one end of said shaft and a spring loaded pawl engaging said ratchet wheel.

49526. Ramapati Ghosh. Improvements in or relating to isolating links. Consisting of a pair of insulators, a disc having an upstanding portion mounted on each insulator and a blade pivotally connected to the upstanding portion of one of the discs, the other end of the blade being held between two contact fingers mounted on the upstanding portion of the other disc.
49527. D. K. Somstham. Table cricket. Comprising a board with two sets of wickets, one of which has a pair of channels and the other a rotatable bat and a number of holes all round the board.
49528. Automatic Telephone & Electric Company Limited. Improvements in telecommunication systems. (May 13, 1952.) The single control path includes at least one gas discharge tube, receiving devices being associated with the control parts.
49529. Imperial Chemical Industries Limited. New oxazoline derivatives. 2-(2'-hydroxyphenyl) oxazolines which bear at least one halogen substituent to the 2-phenyl nucleus.
49530. The English Electric Company Limited. Improvements in and relating to impulse wheel runners. (June 6, 1952.) Splitter separating two half buckets formed by inner edge of one of them; weld seams arranged asymmetrically on one side of splitter on concave side and symmetrically in groove between buckets at the back.
49531. Wingfoot Corporation. Use of a viscosity depressant in the preparation of a resinous foam. Adding to an alkyd resin polyisocyanate foamable mixture a viscosity depressant in an amount of 1 to 25 per cent. by weight based on the alkyd resin.
49532. Montecatini, Societa Generale Per L'Industria Mineraria E Chimica. Improvements relating to the recovery of waste gases in the synthesis of urea from ammonia and carbon dioxide. Ammonia is separated from the mixture by selecting absorption at a pressure higher than atmosphere.
49533. H. Putzer. Improvements in hoisting apparatus or the like. (April 15, 1953.) Comprising a driving shaft carrying a drum for a flexible element, a friction disc adapted to cooperate with a pawl wheel rotatable on shaft, a ratchet wheel rotatable on shaft, an axially resilient friction ring on the shaft and adapted to engage and lock the ratchet wheel.
49534. Organon Laboratories Limited. Process for the preparation of compounds of the pregnane series. HCN is added to tri-esters of $3\beta:11\alpha:21$ -tri-hydroxy pregnane-20-one, water is split off, the product subjected to saponification, subsequently partially esterified and treated with a hydroxylating agent OsO_4 and subjected to oxidative and reductive splitting to oxidise free-OH group to keto group and to introduce an -OH group at the C-atom 17.
49535. Void.
49536. Ciba Limited. Process for the manufacture of aza-cyclo-alkanes. By reacting 2-(tertiary aminoalkyl)-cyclo-alkanones-(1) with hydrazoic acid.
49537. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Coumarine derivatives and process for the manufacture thereof. A 3-acyl-4-hydroxy-coumarin is reacted with an organo-metal compound, R X , wherein 'X' stands for Li, MgCl , MgBr or MgI and 'R' stands for an aryl or an alkyl radical, water is separated from the condensation product and the dehydration product is hydrogenated.
49538. N. V. Appleton Pty. Ltd. Improvements in and connected with adjustable louvres. (May 16, 1952.) The mullion includes longitudinal weather beads between pivots.
49539. Radio Corporation of America. Method of soldering printed circuits. Comprising immersing the surface and conductors in a bath of molten solder, and removing the same from the bath, and again dipping the same in a bath of molten solder having a layer of inert liquid material.

MAY 12.

49540. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of a thiapyran compound. Reacting alkali metal acetylide with tetrahydro-1, 4-thiapyrone and hydrolyzing the metal complex formed.

49541. Fillmore Improvement Company. Oil well pump cleaner. Hollow pierced sucker discharges heated oil at predetermined point in the pump column where paraffin or wax is grooved.

49542. Ciba Limited. Process for the improvement of organic material. Impregnating or incorporating organic material with a solution of oxidiazol compound.
49543. Ciba Limited. Process for the manufacture of new amides. Reacting N-methyl-trimethyl colchicine acid with ammonia, primary or secondary amines.
49544. Schlumberger Well Surveying Corporation. Electric well logging methods and apparatus. Apparatus including electrode means for creating in the borehole a first electric field separately measurable from a second electric field existing in the borehole combination of potential differences generated by these two fields giving indication of electrical characteristics of earth formation.
49545. Ciba Limited. Process for the manufacture of pyridazone compounds. Reacting hydrazine with an organic α -dicarboxyl compound and an organic carboxylic acid of which the carbon grouping in α position is a reactive methylene group.
49546. Gevaert. Photo-Production N. V. Production of a coloured masking image. (May 13, 1952.) The photographic material containing at least two light sensitive silver halide emulsion layers is re-exposed to light through at least one coloured image.
- MAY 13.
49547. Wingfoot Corporation. Improvements in anti-skid control apparatus. One magnet connected to the wheel shaft, another magnet mounted on the shaft via an overriding shaft and the differential flux effect of these on field coils operates a relay.
49548. Dunlop Rubber Company Limited. Improvements in or relating to pneumatic tyres. (June 17, 1952.) Comprises a circumferentially extending winding of contiguous turns of inextensible material having a cross sectional profile such that the adjacent turns mesh.
49549. Arvey Corporation. Improvements in or relating to process for preparing bicyclo-(2.2.1)-2, 5-heptadienes and the products resulting therefrom. Reacting cyclopentadiene or substituted cyclopentadiene with acetylene.
49550. Arvey Corporation. Manufacture of new polycyclic compounds and insecticidal compositions prepared therewith. By reacting cyclopentadiene and hexahalogenated polycyclic diene to produce two to five linearly fused bicyclo-(2-2-1)-heptane ring.
49551. N. V. De Bataafsche Petroleum Maatschappij. Composition for defoliation of plants. Consists of a compound of the formula $N(NO)Y$
- $$\begin{array}{c} C=O \\ | \\ NH\ X \end{array}$$
- where X is hydrogen or alkyl or aryl radical and Y is an alkyl or aralkyl radical with a solvent.
49552. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to the preparation of an oxygen free fraction from a crude gaseous mixture containing oxygen. (July 24, 1952.) The gas mixture is mixed with hydrogen in excess of that is stoichiometrically required.
49553. Ciba Limited. New ox-diazole compounds and process for their manufacture. Carboxylic acid-N:N'-dihydrazide is reacted with an agent capable of splitting off water.
49554. P. K. Puri. Improvements in or relating to the manufacture of boots and shoes. Cutting lower portions of an extra heel, which is adjusted over the insole of a shoe.
- MAY 14.
49555. Council of Scientific and Industrial Research. Boron-free enamels. Comprising quartz with or without felspar and titanium oxide and one or more of soda ash, $CaCO_3$, $MgCO_3$, $NaNO_3$, fluorspar, ZnO with a potassium carbonate or nitrate.
49556. British Insulated Callender's Cables Limited. Improvements in protective coverings for electric cables, pipes and the like. (June 4, 1952.) Separating the component layers of the tape as they leave the supply roll and separately lapping them helically on the cable.
49557. Inland Steel Company. Improvements in or relating to process for making steel. [Addition to No. 43415.] Introducing into a basic lined refining zone, molten iron, iron oxide bearing

material, lime containing basic slag-forming material, injecting oxidising gas and turbulently intermixing the slag, iron oxide.

49558. Schlage Lock Company. Improvements in or relating to face plate for a door lock. Comprising an apertured sheet having a recess encompassing the aperture the bottom of the recess being inclined to the sheet.

49559. Societe D'Electro-Chimie, D'Electro-Metallurgie Et Des Acieries Electriques D'Ugine. Process for producing pulverulent metallic titanium. (February 26, 1953.) Reacting Al-Ti alloy with a reagent reacting differently with the alloy metal.

49560. Latham Abercrombie & Co., Ltd. Improvements in or relating to duplicating machines. A container enclosing a structure, one side of the structure having means for effecting duplicating work in black and white, the other side having means for duplicating in colours.

49561. D. H. Coles. Improvements in and relating to printing plates for use in offset printing. Producing a positive image on a tissue paper, affixing the tissue to the face of a carrier, removing the backing sheet from the tissue, placing the tissue bearing side of the carrier onto a sensitised printing plate and directing light through the carrier bearing the tissue.

MAY 15.

49562. Vacu-Blast Limited. Improvements in or relating to grit blasting apparatus. (May 15, 1952.) The apparatus having an open sided box-like hood for retaining the abrasive material and the debris is characterised in that the apparatus is self-adhesive to the work, the surface of which is treated

49563. Standard Oil Development Company. Improvements in hydro-forming of naphthas. A relatively small controlled amount of oxygen or steam is introduced into the reaction zone containing a fluidised bed of hydroforming catalyst.

49564. Marshall's Tea Machinery Company Limited. Improvements in or relating to tea leaf rolling machines (May 28, 1952.) Pressure cap is pivotally mounted on one end of an arm over the container and the other end of said arm is connected to means capable of rotating the arm about a horizontal

axis fixed intermediate the ends of said arm.

49565. Bowden (Engineers) Limited. Improvements in and relating to flexible hose couplings. (December 11, 1952.) Comprising inner and outer gripping members to grip the projecting reinforcing material of the hose, clamping members for operating the gripping members and a tapered insert to squeeze the projecting inner resilient layer between itself and the inner gripping member.

49566. Void.

MAY 16.

49567. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to arsenical compositions. (June 26, 1952.) 1, 2-bis(4'-arsenophenylamino)-ethane or a salt thereof is associated with a carrier material.

MAY 18.

49568. Void.

49569. Stamicarbon N. V. Hydroperoxides of diparatolyl methane and 1, 1-diparatolyl ethane and process for the preparation thereof. Contacting diparatolyl methane and 1, 1-diparatolyl ethane with oxygen at 90°-150°C, keeping the hydrocarbon at dispersed state.

49570. American Cyanamid Company. Improvements relating to a nutrient medium adapted to produce both chlorotetracycline and cobalamins. (May 30, 1952.) Which contains water, organic nitrogen, calcium carbonate, carbohydrate, ammonium and chloride ions, magnesium, iron, manganese, zinc, and cobalt in certain definite proportions.

49571. Imperial Chemical Industries Limited. Improvements in or relating to the melting and casting of high melting point metals or alloys. (May 30, 1952.) Arc melting and casting metals and alloys under an inert atmosphere in a cooled crucible communicating through a centrally disposed orifice in its base with a separable mould.

49572. Anglo-Iranian Oil Company Limited. Improvements in or relating to the separation of hydrocarbons. Reacting mixture of hydrocarbons with urea solution, bubbling gas through the product with decantation to remove raffinate and recovering extract hydrocarbons from urea solution

49573. The Trichy Metal Works. Improvements in or relating to tiffin carriers. Providing two cross members having slots pivotally connected to the straps, a locking key being adapted to pass through said slots and a slot in a knot fixed to the cover of the topmost container.

MAY 19.

49574. H. G. Martin. Improvements in and relating to reservoir writing instruments of the ball tip type. (May 22, 1952.) [Addition to No. 40431.] A follower constituted by flocculent material and charged with a viscous medium is provided at one end of the ink column.

49575. Vereinigte Österreichische Eisen—Und Stahlwerke Aktiengesellschaft. Arrangement for electrically controlling the lowering speed of sluice gates in hydroelectric generating stations. D.C. generator driven by lowering motion of sluice gate connected in series with d.c. motor of brake withdrawing device of the gate and in opposition to a current source of the constant d.c. voltage.

49576. Harry Ferguson Limited. Improvements in or relating to mountings for mounting apparatus on tractors. (May 20, 1952.) Main mountings are laterally spaced apart and respectively on the inner and outer side the outer mounting part being located on a lateral extension from the tractor.

49577. Void.

49578. M. Florio and D. J. Tinio. Process of manufacturing construction materials and the like from coconut husks. Drying coir dust and shorts, preforming into boards and subjecting the boards to pressure under temperature.

49579. Lanova Aktiengesellschaft. Improvements in or relating to injection internal combustion engine with energy cell means. Combustion chamber offset from cylinder centre line has lower part opening into cylinder and of cylindrical cross sections in planes perpendicular to centre line and upper part of reducing cross section; opening of chamber widened on the side of cylinder centre line.

MAY 20.

49580. Sudhir Lal Mukherjee and Albert David Ltd. A process for the manufacture of "3:5-dioxypyrazolidine deriva-

tives. [Divided out of No. 48771; ante-dated to January 9, 1953.] 3, 5-Di-oxo-1, 2-diphenyl-4-alkyl-4-halogeno pyrazolidines are reacted with hydrazobenzene, phenyl hydrazine or hydrazine hydrate.

49581. Sudhir Lal Mukherjee and Albert David Ltd. A process for improvements in or relating to the manufacture of "3:5-dioxo-pyrazolidine derivative. [Divided out of No. 48770; ante-dated to January 9, 1953.] 3, 5-dioxo-1, 2-diphenyl-4-n-butyl-4-bromo-pyrazolidine is reacted with hydrazo-benzene, phenylhydrazine or hydrazine hydrate.

49582. Standard Oil Development Company. Improvements in or relating to inhibition of corrosion. Comprises an aqueous solution of a metal phosphate, phosphoric acid and a compound selected from the class consisting of alkali metal nitrates, chlorates and nitrites.

49583. B. P. Yates. Improvements in or relating to the manufacture of cementitious compositions. Consisting of reactive magnesium oxide, water and water soluble sulphate.

49584. F. C. Mehra Industries. Improvements in or relating to cycles and the like velocipedes. Upper and lower frames connected to each other by forked shaped pieces made from rods.

49585. Blackburn and General Aircraft Limited. Improvements in or relating to aircraft. (May 21, 1952.) Internal stair way giving access to passenger compartment constructed partly in one end remainder in the other of two calm-shell doors closing freight compartment.

49586. Blackburn and General Aircraft Limited. Improvements in or relating to aircraft. (May 21, 1952.) Bulky articles such as motor cars on special carriers, goods containers cattle pens, sets of passenger seats or floor units raised by lift at end of freight compartment and supported on rails intermediate the floor and ceiling of the compartment.

49587. Blackburn and General Aircraft Limited. Lashing for securing motor cycles in transport vehicles, such as aircraft. (May 30, 1952.) A part shaped to fit over the saddle which is connected by two adjustable lines and a chock for engaging the front wheel.

49588. Automatic Telephone & Electric Company Limited. Improvements in telecommunication systems. (May 24,

1952.) A marking signal is applied from a point of the first group to idle trunks leading to points of the second group.

MAY 21.

49589. Dr. G. Foges. Improvements in or relating to a method of distributing colloidal dispersions of silica particles in water on natural and synthetic fibres. Cooling the colloidal dispersion of silica particles in water below the dewpoint of the air vapour mixture surrounding the spray.

49590. Council of Scientific and Industrial Research. Improvements in or relating to the manufacture of fruit juice products. Wherein before drying the pasty mass is reduced to forms such as shreds, flakes, pellets or the like.

49591. Void.

49592. T.M.M. (Research) Limited, and Habbens Limited. Improvements in building motions for forming yarn packages in textile machinery. (May 30, 1952.) In combination with a motor causing relative reciprocatory movements of the yarn guides and yarn packages, means for effecting reversals of such motor and two spaced stops for actuating such means.

49593. Power Jets (Research & Development) Limited. Jet deflectors for aircraft. (May 30, 1952.) Curved guiding side wall extending beyond nozzle orifice and means for causing jet to follow curvature of wall transversely.

49594. Standard Telephones and Cables Limited. Improvements in or relating to electric cable insulation. (June 23, 1952.) Strip is subjected to a humidifying process to impart a controlled moisture content.

49595. Ray-O-Vac Company. Improvements relating to primary electric batteries. Consisting of a flexible non-conducting, plastic envelope, within which electrodes are sealed, a current collector and an electrolyte and means for puncturing the envelope for making electrical contacts.

49596. Western Electric Company Incorporated. Multi-channel carrier telephone systems. (June 26, 1952.) A combining circuit to supply both side bands and the carriers to the transmission medium and a compandor.

49597. Metropolitan-Vickers Electrical Company Limited. Improvements relating to liquid-immersed circuit breakers. (June 3, 1952.) Including bridging conductor arranged for movement into and away from the fixed contacts and with arc controlling shrouds.

49598. G. W. Patchett and Sterling Engineering Company Limited. Improvements in or relating to cartridge magazines for automatic firearms. A helical compression spring maintained in arcuate form lengthwise to correspond with contours of the magazine.

MAY 22.

49599. Shri Dhar. Improved method of and means for manufacturing glass beads. [Addition to No. 27761.] Mould consisting of two parts one fixed in an inclined on vertical position to a panel of a box and the other movable and hinged to the fixed one.

49600. Textile & Chemical Research Company Limited. Apparatus for washing artificial threads. (April 7, 1953.) Comprising a pair of similar roller assemblies arranged side by side around which the thread is passed, each assembly comprising a conical roller and a co-axial hollow cylindrical roller at that end of the conical roller of large diameter.

49601. Standard Telephones and Cables Limited. Improvements in or relating to electrical counting circuits. (October 9, 1952.) With crystal triode, for each stage, arranged to have an on state and an off state, a common pulse input for all the crystal triodes and means inter-connecting each consecutive pair of the triodes responsive to the first triode of the pair assuming its on state to prepare the second triode, for operation from its off state to its on state in response to the next pulse.

49602. Standard Telephones and Cables Limited. Improvements in or relating to telegraph systems using regenerative repeaters. (June 27, 1952.) Comprising a regenerator repeater and means automatically connecting it to regenerate signals from whichever of the two stations is sending and to retransmit the regenerated signals to the other station.

49603. The Electric Auto-Lite Company. Improvements in or relating to horns. It has a housing capable of distortion

Having an open end and a closure member cooperates with the open end.

49604. **Traxen N.V.** Method and apparatus for producing seamless filled capsules. Encapsulating material has a viscosity of not more than 1500 centipoises and envelope of composite drops are congealed in liquid cooling medium.

MAY 23.

49605. **K. V. Karantha.** Temporary tap connector for electric cables. Consisting of a pin whose tapering end pierces the insulation of the main cable and penetrates some distance along its conductor core.

49606. **Standard Telephones and Cables Limited.** Improvements in or relating to electrical flip flop circuits. (October 9, 1952.) Comprising two crystal triodes connected in a circuit as to be

49607. **Standard Telephones and Cables Limited.** Improvements in or relating to electric signal and automatic telephone exchange systems. (October 9, 1952.) Transmitter and receiver interconnected by a signal line, a crystal triode at the receiver having an on and off state and a relay under its control, such that when the triode is in its off (respectively on) state and the relay is released (respectively operated) when no signal is received and the crystal changes to its on (respectively off) state and the relay is operated (respectively released) when a signal is received.

49608. **The Carborundum Company.** Abrading article such as scouring implements. A granular abrasive material adhesively secured to a foam rubber backing.

49609. **W & T. Avery Limited.** Improvements in stays for use in connection with weighing scales or other lever apparatus. Providing a thin flexible wire connection between the ends of the stay and the associated parts of the weighing scale.

49610. **Imperial Chemical Industries Limited.** Improvements in or relating to the recovery of glycerol. (June 23, 1952.) By evaporating the liquor on at sub-atmospheric pressure.

49611. **British Timken Limited.** Improvements relating to roller bearings. (July 23, 1952.) Race surfaces forming the

are provided with annular ribs, situated intermediate thin ends.

49612. **American Home Products Corporation.** Improvements in or relating to process of preparing a therapeutic composition. A slurry of kaolin containing an amoebicide is mixed with an emulsion of aluminium hydroxide gel with mineral oil and pectin, the pH of the composition adjusted and an antibiotic agent is added thereto.

49613. **The Dry Accumulator Company Limited.** Improvements in or relating to electric storage batteries. Of the dry type in which the separators are in the form of coherent sheets composed of an intimate mixture of absorbent sulphuric acid-resistant mineral particles and fibres of mineral beaten together as a slurry and deposited in sheet form and then dried.

49614. **International Business Machines Corporation.** Apparatus for transferring magnetic information. (October 16, 1952.) Using one or more bi-stable magnetic storage elements coupled by a transfer circuit to a voltage responsive device, said transfer circuit containing a uni-directional current controlling element for discriminating against voltage pulses.

49615. **The Carborundum Company.** Waterproofing sand-paper and methods of manufacturing the same. Preparing a paper sheet in which fibres are bonded together by an elastomer, applying the making coat directly to the paper followed by the abrasive grains and sandsize.

49616. **The Carborundum Company.** Abrasive article. Anchoring a continuously bonded layer of abrasive particles on to a backing layer by means filamentary reinforcing elements.

49617. **Carlo Erba S.p.A.** Process for the preparation of 2-4-diamino-pyrimidine derivatives. Reacting β -keto nitriles of the formula $R'-CH(CN)-CO-R''$ with an amine of the formula $R'''NH_2$ and condensing the formed product with guanidine.

MAY 25.

49618. **Imperial Chemical Industries Limited.** An improved apparatus for obtaining ready supplies of hydrogen sulphide gas and the like. A hard glass test tube perforated at its bottom provided with a glass bulb having a short stem containing a glass ball

- valve, fused at its bottom thereby enclosing the perforated part is fitted in an acid jar.
49619. Void.
49620. Durand and Huguenin A. G. Process for the manufacture of salts of sulphuric acid esters of leuco vat dyestuffs of the anthraquinone series. Vat dyestuff is treated in a mixture of dimethyl-formamide and/or diethyl-formamide with diethyl-cyclohexylamine and/or diethyl-(mono-methylcyclohexyl)-amine with chlorosulphonic acid.
49621. Dunlop Rubber Company Limited. Resin compositions. (June 3, 1952.) Void after publication. Comprising a dispersion of a resin based on vinyl chloride or vinylidene chloride in a plasticiser.
49622. Dunlop Rubber Company Limited. Improvements in flexible and extensible hose. (June 25, 1952.) An internal helical reinforcement of wire is enclosed in a flexible impermeable corrugated tube, the coils of the wire being held apart by the corrugations of the tube.
49623. F. Kallay. Improvements in or relating to office files and attachments therefor. Comprising a metal strip having clamps and a suspension bar held by the clamps.
49624. Unilever Limited. Improvements in the preparation of protein solutions. (June 6, 1952.) Adding substance capable of reducing the pH of the solution.
49625. British Telecommunications Research Limited. Improvements in or relating to sampling arrangements for obtaining pulses from an input waveform. (May 27, 1952.) A pair of valves with their anodes and grids cross-connected and control wave applied to grid of one of the valves through a rectifier, the resulting potentials of the anodes controlling cathode follower output valves from whose cathodes desired outputs are obtained.
49626. British Telecommunications Research Limited. Improvements in or relating to high-speed storage devices of the magnetic drum type. (May 27, 1952.) Magnetic drum with tracks each of which having a reading head, a signal receiver common to all the reading heads with which it is successively associated in turn by distributing equipment synchronised with the movement of the drum.
49627. British Telecommunications Research Limited. Improvements in or relating to high-speed storage devices of the magnetic drum type. (May 27, 1952.) Magnetic drum type storage device on which data is registered to control an operation depending on a subsequently recorded instruction within the scan interval corresponding to the data, two reading heads being provided one of which operating earlier than the other.
49628. British Telecommunications Research Limited. Improvements in or relating to fee-registering arrangements for use in telephone or like systems. (May 27, 1952.) Arrangement for registering total fees in which a continuously operated high speed register device is provided.
49629. British Telecommunications Research Limited. Improvements in or relating to telephone or like systems. (May 27, 1952.) There is provided a spring acting on the bridge operating member which acts in response to an electromagnet.
49630. S.A.I.C.A. Societa Anonima Italiana Colori Affini. Dyeing emulsions, particularly suitable for dyeing and printing textiles. Comprising an emulsion of water and of a liquid hydrocarbon and containing an emulsifying non-polymerizing agent and in dyestuff.
49631. Roulements a Billes Miniatures S. A. Spindle bearing application in textile machines. Mounting the rotary spindle portion in fluid bearings of which at least one is radial and the other a thrust bearing, the fluid being supplied through a fixed support.
49632. Aluminium Laboratories Limited. Apparatus for the treatment of finely divided fluidizable solid material. Comprising a retort having heat conducting sidewalls, a horizontal porous diaphragm dividing the retort into a gas chamber, and a fluidizing chamber.
49633. Ciba Limited. Process for the manufacture of new esters. 1:4-Dihydro-4-oxo-1-phenyl-6-lower alkyl-pyridazine-3-carboxylic acids or functional derivatives thereof are converted into esters by known methods.

MAY 26.

49634. S. D. Katave. A device for extruding flour in paste form. A strip

- with a pin is provided in a cupshaped piece in the machine.
49635. Council of Scientific and Industrial Research. A process for the recovery of elemental sulphur from copper pyrites. Reacting copper pyrites with cupric chloride.
49636. Standard Oil Company. Improvements in or relating to process for rejuvenating platinum type hydroforming catalysts and a cyclic hydroforming process employing the same. By contacting the deactivated catalyst with an oxygen—containing gas at about 950°F.
49637. Ruhrchemie Aktiengesellschaft. Process for the production of aldehydes and aldehyde derivatives from dicyclopentadiene. Dicyclopentadiene is partially hydrogenated below 100°C and the product subjected to the OXO—synthesis reaction for the addition of CO and hydrogen.
49638. F. Diebold. Improvements in or relating to wrenches. Characterised in that its gripping portions are located at a distance equal to R_1 and R_2 for hexagons and squares respectively and inner surface having at least one projecting part in between said portions.
49639. Void.
49640. Standard Telephones and Cables Limited. Improvements in or relating to electro-acoustic transducers. (June 20, 1952.) Of the rocking armature type having a magnetic circuit comprising an armature of magnetic material caused to rock in response to audio currents flowing in coils wound on pole-pieces co-operating with a magnet.
49641. The Woodall-Duckham Vertical Retort and Oven Construction Company (1920) Limited. Improvements in or relating to batteries of horizontal coke ovens. (June 5, 1952.) Each of the main buckstays carry an auxiliary buckstay and wherein means are provided for adjustment of auxiliary buckstay relatively to its main buckstay.
49642. U. Brunck. Method and appliance for joining metal parts. Protecting welding area by a casing made of a material of higher melting point than the metal to be welded and bringing metal parts towards each other under increasing pressure.
49643. J. L. Reutter. Improvements in or relating to movable equipment for electro-magnetically controlled devices having a shuttle forming a magnetic core adapted for reciprocating movement. Having a shuttle forming a magnetic core comprising an elongated element the centre portion of which forms a portion of larger diameter which in turn supports a tubular element having bundles of laminations.
49644. Ciba Limited. Process for stripping or lightening dyeings. The dyed material is treated with reaction product of at least 4 molecular proportions of an α : β -alkylene-oxide on an organic amine.
49645. Ciba Limited. Process for the manufacture of aryl-bis-quaternary amine salts. An amine or one of its monoquaternary salts is reacted with a reactive ester of an alcohol.
49646. The Benjamin Electric Limited. Improvements in lighting fittings for elongated electric lamps. (June 5, 1952.) Two portions of lighting fitting spaced by member(s) between them, lamp holders for supporting the lamp between said end portions and movable reflectors means in two separated portions whereby light is directed in two opposed directions.
- MAY 28
49647. Babcock & Wilcox Limited. Improvements relating to vapour generating and superheating units and to the control of the temperature of superheated vapour. Gases withdrawn from the furnace chamber are cooled by a heat exchanger.
49648. Colgate-Palmolive Company. Dentifrice compositions. Comprising polishing agent and condensation product of ethylene dioxide and polypropylene glycol.
49649. The Carborundum Company. Pressure sensitive adhesive coated sheet material and method of making the same. Wherein the pressure sensitive adhesive is protected by a pigmented film of polyethylene which is embossed to form parallelograms.
49650. R. Martiri. Improved hydrocarbon burner. Comprises at least one main burner and an auxiliary burner and a tubular gasified with a filling of filamentary material acting as a heat diffusor and as a means for subdividing the liquid fuel.

49651. Robert Bosch GMBH. Improvements in fuel injection nozzles for internal combustion engines. Pin on the end of nozzle needle penetrates cylindrical injection aperture of at the most 0.9 mm. with spacing around it during first part of opening stroke when needle is completely raised aperture is fully open; nozzle operates first as pin nozzle and then as hole nozzle.

49652. Knud Abildgaard-Elling. Preparation of esters of penicillin with alcohols containing a secondary amino group. Reacting a penicillin salt with a compound of general formula $X.R_1.N.H.R_2$, where X is halogen, R_1 is divalent alkyl group and R_2 is alkyl, a cycloaliphatic or aralkyl group.

49653. Armstrong Patents Co., Limited formerly called Armstrong's Patents Company Limited. Improvements in or relating to hydraulic shock absorbers and the like differential pressure-operated damping means. (May 27, 1952.) One of the pistons being provided at adjacent its ends with a seal of resilient material engaging with the cylinder wall.

MAY 29.

49654. J. G. Talati. Improved device for providing inner lining on metal pipes with cement or the like material. Pulleys are fitted to shafts and are driven by prims moves and other spaced pulleys are idle and rotate when metal pipes are mounted between pair of rollers.

49655. G. Mastracchi-Manes. Improvements in or relating to sliding clasp fasteners. Comprises one continuous head section and one continuous pincer-like section both being in gripping engagement with each other through the medium of a slot formed at each clamping end in the pincer-like section.

49656. The General Electrical Company Limited. Improvements in or relating to electrical devices having envelopes fitted with caps. (June 5, 1952.) Neck of the envelope is formed by blowing heat softened glass into surrounding mould formed with inverse keys, for moulding keys to engage with inverse keys on the cap, and maintaining reduced pressure at the surfaces of the keys of the mould.

49657. Olympia Werke West G m b H. Paper holder for typewriters and like

machines. Having a frame which consists of two carrier arms, three transverse rods and an eraser platform, the eraser platform being rotatably mounted on one of the transverse rods and under the influence of a spring.

49658. Universal Oil Products Company. Process for the reforming of hydrocarbon mixtures. Comprises passing over platinum or palladium catalyst on acid-acting support in presence of hydrogen at super atmospheric pressure and between 320°-540°C and adding therein water to control hydrocracking.

MAY 30.

49659. R. V. Tamhankar. Apparatus for magnetic testing of soft ferro magnetics such as electrical steel sheets. In which the core loss in the material under test is compared with the core loss in a standardised sheet.

49660. Owens-Corning Fiberglas Corporation. Process and apparatus for the continuous production of glass filaments or fibers. A stirrer is located between the container and the feeding chamber to stir the molten glass.

49661. Olympia Werke West G m b H. Paper holder on typewriters with surface extending over the width of the carriage. Comprising a paper holder and a withdrawable ruler with a scale, the ruler being guided within the holder.

49662. Olympia Werke West G m b H. Carriage guide for typewriters or like machines. Comprising a ball cage having a gear mounted on a ball in the centre part of the ball cage, said centre part being linked with slight play with the outer parts of the ball cage.

JUNE 1.

49663. Kezer Limited. Improved blue-flame circular-wick domestic stove. Consisting of a fuel container, a wick cage, a vaporiser assembly comprising two perforated tubes enclosing the wick cage, a flame guard and a chimney.

49664. Jnan Saran Chatterjee. Wide band oscillator in the H.F. and U.H.F. ranges. Plate and grid of oscillator valve connected respectively to a variable inductance and a plate of a condenser or respectively to two variable inductances with a condenser between them, and a single control means to vary the inductance or inductances and after

decreasing to the minimum to vary the length of the R.F. Short-circuited transmission line in one continuous operation.

49665. American Home Products Corporation. Improvements in or relating to a cyclization process for producing cyclic compounds. Heating tertiary amino-haloalkane of at least 6 carbon atoms to 70—120°C in highly polar organic solvent and precipitating the quaternary compound formed.

49666. Void.

49667. Imperial Chemical Industries Limited. New compositions for use in the manufacture of light-sensitive photographic materials. (June 16, 1952.) Comprising an emulsion containing a light-sensitive aqueous gelatino-silver halide emulsion and a solution of a cellulose ether in a solvent.

49668. Void.

49669. C. A. Parsons & Company Limited. Improvements in regenerative heat exchanger. (June 12, 1952.) A sleeve valve arrangement is provided on either side of the matrix for controlling the flow.

JUNE 2

49670. General Steel Castings Corporation. Improvements in or relating to railway vehicle truck. Yieldable pads arranged to yield in shear to forces applied transversely of the truck to accommodate relative movement of bolster and truck.

49671. Deutsche Gold-Und Silber-Scheidanstalt vormals Roessler. A continuous process for the bleaching of cellulosic textiles. Textile is subjected to intensive mechanical working in bleaching bath for short period, freed from bleaching solution and passed through closed chamber

49672. The General Electric Company Limited. Improvements in or relating to electrical devices provided with metal caps, and to the manufacture of such devices and caps. (June 9 1952.) Wherein the metal shell of the cap is composed of aluminium and at least the exterior of surface of the shell is provided with an adherent protective layer of aluminium oxide.

49673. Void.

JUNE 3.

49674. Siemens and Halske Aktiengesellschaft. Pulse modulation transmission systems. In which some pulses are used for transmission of voice channels, and that at least one pulse is used for telegraph channels.

49675. F. Kallay. Improvements in or relating to sheets of paper used as cheque forms. Comprising one portion having thereon the usual arrangement for entry of date, name, amount said portion being extended to one side said extension being divided by a series of horizontal parallel lines.

49676. N. V. Amsterdamsche Maatschappij Tot Exploitatie Van Octrooien. Process for the bleaching of coconut fibres. Treating with hydrosulphite immediately after separation from the pitch.

49677. British Federal Welder and Machine Company Limited. Improvements in or relating to metal stripping machines. (November 14, 1952.) Comprising a base supporting clamping members, a tool holder on which are mounted planing tools, a vertically movable structure supporting clamping members, guides for a traversing tool carriage or holder carrying a number of planing tools.

49678. Universal Oil Products Company. Process for the catalytic conversion of gasoline hydrocarbons. Introducing a halogen compound reactable with alumina to a reaction zone, where gasoline is hydrocracked in presence of a catalyst comprising alumina, combined halogen, and platinum or palladium.

49679. O. Siemen and J. Hinsch. An improved self-priming centrifugal pump. Extraction of gases effected by suction stage at the entrance to the impeller of the centrifugal stage.

49680. H. Parbhoo Das & Co. Improvements in or relating to duplicating machines. Movement from 'on' to 'off' position is effected by indirect means in conjunction with rotating drum.

JUNE 4.

49681. Void.

49682. B. Rajnai. Improvements in hand-operative knitting machines. A needle-bed embodying a row of rectroceal needles having arrangement to move the needles backwardly and forwardly

needle retaining means and a shuttle device.

49683. B. Rajnai. Improvements in hand-operative knitting machines. A needle-bed embodying a row of reciprocal needle each consisting of an upstanding hook portion at the knitting end and extending into a stem which extends into a downturned leg at the inner end of the needle.

JUNE 5.

49684. T. M. Rajendran. Fluid power transmission device for velocipedes. Comprising pump operated by pedal to convey fluid via one pipe to motor to operate rear wheel axle and return the fluid to pump wherein pump has larger diameter than motor.
49685. Industrial Service & Engineers Ltd. Improvements in or relating to seed drills. The ends or tips of the blades mounted on a shaft in the dispenser, are fitted with pieces of flexible material such as rubber or canvas.
49686. Void.
49687. Industrial Service and Engineers Ltd. Improvements in or relating to Persian wheels. Post dated to March 5, 1954. Comprising a buckets wheel, a chain extending throughout the width of said wheel, two sets of buckets mounted on said chain and a trough placed at right angles to the wheel axle.
49688. National Research Development Corporation. Improvements in or relating to internal combustion engines. Clearance volume in cylinder changed by varying distance of at least part of piston crown from means for converting reciprocating motion of piston into rotary motion.
49689. May & Baker Limited. Improvements in or relating to pyridine derivatives. (June 6, 1952.) Reacting pyridine 4-carboxyimide with ammonia, primary lower alkyl amine or hydrazine.
49690. May & Baker Limited. Improvements in or relating to preparation of 3:6 di-(4-pyridyl)-1:2-dihydro-1:2:4:5-tetrazine. (June 6, 1952.) Reacting pyridine carboxyimide with hydrazine and isolating tetrazine compound formed therein.
49691. N. V. Chemische Industrie "Rids", and Nederlandse Centrale Organisatie Voor Toegepast-Natuurwetenschappelijk

Onderzoek. Agents for combating micro-organisms, such as fungi, yeasts, bacteria and protozoa, and process for combating these micro-organisms. Containing as active ingredient, N, N'-(para-phenylene)-bis-rhodanine admixed with a carrier or a diluent.

JUNE 6.

49692. Inventa A. G. Process for treating sulfite waste liquor. Subjecting waste liquor to the action of hydrogen under pressure above 250°C in the presence of a watersoluble thiomolybdate or thio-tungstate catalyst.
49693. Void.
49694. PERFOGIT Societa per Azioni. Apparatus for melt-spinning. Comprising a group of spinning heads, a single source of molten material for feeding said heads, a single jacketted vessel housing said heads.
49695. PERFOGIT Societa per Azioni. Process for the preparation of terephthalic acid. Toluene is chloromethylated and the chloromethyl toluene is converted to terephthalic acid.

JUNE 8.

49696. United States Steel Corporation. Electrochemical method for coating steel surfaces and the product thereof. The electrolyte contains phosphate radical and chromium ions in which chromium is hexavalent.
49697. Biochemie Gesellschaft Mit Beschränkter Haftung. Production of penicillins. (April 22, 1953.) Recovering penicillin from aqueous solutions by precipitation with acids or by carrying over the penicillins in the presence of acids from said solutions into organic solvents and separating them by evaporating the solvent.
49698. J. R. Geigy A.-G. Process for the production of N-aryl-N'-aminoalkyl-ureas. By reacting a reactive functional derivative of 2,6-dimethyl- or 2,4,6-trimethyl-carbanilic acid with a diaminoalkane.
49699. W. Kunik. A sealable container of thermoplastic material, process of sealing such a container and apparatus for carrying out the process. Comprising a container body having an open top and an outer circumferential bead, a cover with a depending skirt, a packing

ring and a bead on the bottom edge of the said skirt.

49700. The Carborundum Company. Waterproof sandpaper and backing therefor. Comprising a waterleaf sheet containing the cellulose fibers, a wet strength agent and a treatment vernish.

49701. Koppers Company, Inc. Improvements in or relating to regenerative underjet coking retort ovens. [Divided out of No. 46806; anti-dated to February 28, 1952.] Wherein the recirculation duct when located in the oven mat and the rich gas nozzle are all inter-connected with the silica brickwork for simultaneous movement of them together.

JUNE 9.

49702. Swami Vimuktananda. An improved type of plant for producing fuel gas and manure. A digestion plant having a digester tank and gas holder cover having a U-shaped outlet tube for removing the slurry in tank from top layers of slurry.

49703. Semtex Limited. Improvements in the manufacture of patterned sheet material. Calendering a variegated sheet superimposed on a base sheet of thermoplastic composition of the same colour as one colour in the variegated sheet.

49704. Smitsvonk N. V. Low voltage surface discharge spark plug. Sparking surface has simple or multiple subdivisions

JUNE 10.

49705. J. K. Tamboli. Variable wheel-base motor vehicle. Rear wheels axle of vehicle of front wheel driven type vehicle is made to slide and vary the distance between the front wheel and rear wheel.

49706. Void.

49707. Betonbau G.m.b.H. Saddle backed girder. Consisting of staggered portions, adjacent ends thereof being detachably connected by fastening means, at which the portions have similar radii of curvature.

49708. The Carborundum Company. Supporting devices for coated abrasive products. Contact wheel supporting an abrasive coated belt has series of diagonally disposed lands and clearance spaces.

49709. C. A. Parsons & Company Limited. Improvements in and relating to heat exchangers. (June 19, 1952.) The heat exchanger is formed of cells which form the flow channels and which are further divided in flow paths.

JUNE 11

49710. Standard Oil Development Company. Improvements in or relating to the handling of fluidized solids. A deep leg is provided in the reacted and a real pot surrounds the deep leg.

49711. The National Smelting Company Limited. Improvements in or relating to cooling molten metal and separating molten metals by cooling. (June 16, 1952.) Cooling molten metals by passing through a trough having cooling sections located therein.

49712. The General Electric Company Limited. Improvements in or relating to electric circuit arrangements for operating low pressure electric discharge lamps. (June 17, 1952.) Oscillatory circuit connected in the output circuit of valves, and a secondary inductance in the lamp circuit coupled with a primary inductance in the oscillatory circuit so as to generate by step-up transformer action an amplified oscillatory voltage applied between electrodes of said at least one lamp.

49713. International Business Machines Corporation. Pulse responsive gaseous discharge storage or counting tube (March 25, 1953.) Comprising plurality of cathodes, common anode, first glow transfer means coupling pairs of cathodes so that pulses effect transfer of glow discharge from cathode to cathode in predetermined sequence and second glow transfer means to cause the glow discharge to skip a predetermined number of cathodes in response to pulses applied to the second glow transfer means.

49704. Smitsvonk N. V. Low voltage lin-containing fodder and method for producing the same. Penicillin is present in the form of a penicillin compound sparingly soluble in water, the particles of the compound being enclosed in particles of a hydrophilic colloidal organic substance having a water content less than 5 per cent.

49715. Powers-Samas Accounting Machines Limited. Improvements in or relating

to statistical machines. (August 21, 1952.) Comprises cooperating feed rollers for advancing statistical card in a sensing position.

49716. V. E. DePenning. Improvements in joints of rail of railway permanent way. [Divided out of No. 46562; ante-dated to January 17, 1952.] T-shaped fish plates secured to one rail end and supported by sockets fixed to adjacent rail end.

49717. The British Thomson-Houston Company Limited. Improvements relating to the production of luminescent screens. (June 19, 1952.) Dry oxygen is admitted to envelope whilst it is in a heated condition from the outgassing process and prior to the sealing thereof.

JUNE 12.

49718. Stamicarbon N.V. A method of an apparatus for the breaking down of froth. By introducing the froth into the core of a gas vortex established in a rotation chamber.

49719. Societe Des Usines Chimiques Rohone-Poulenc. Improvements in or relating to phenthiazine derivatives. (May 13, 1953.) N-alkylaminophenthiazines are produced by (a) converting a corresponding 10-halogenoalkylphenthiazine into the amine (b) reducing a 10-cyanoalkyl phenthiazine (c) reacting a phenthiazine with a halogeno phthalimidoalkane and treating the product to effect its mission.

49720. H. Bentley. Improvements in or relating to high pressure oil burners. Incorporating an automatic valve responsive to oil pressure to release oil into return tube.

49721. Standard Telephones and Cables Limited. Improvements in or relating to electro-acoustic transducers. (June 13, 1952.) Efficiency of the horn coupling the transducer unit to the atmosphere being low at the frequency of the major mechanical resonance of the vibrating elements of the microphone unit.

49722. Preussische Bergwerks-und Hutten Aktiengesellschaft Zweigniederlassung Erdol und Bohrverwaltung. Process for making filter wells. Boring rods may be used for making bore holes and these boring rods may be used as a casing tube for making bore holes

49723. J. Petcho. Process of preparing thermosetting resins. Mixing an aqueous mixture of a phenol, urea or aldehyde or all thereof with an alkaline gell-forming salt agitating and then subjecting to infra red rays.

JUNE 13.

49724. H. Z. Kansara. Improvements in or relating to cookers. Having an inwardly projecting support for supporting a plate, said plate having one or more openings to support cooking vessels in suspended position from the same.

49725. The Firestone Tire & Rubber Company. Improvements in or relating to wheel tires and rims. Circumferentially split tire rim adapted to close inflation chamber of tire, with provision for sealing the split.

49726. The Squier Corporation. Bearing housings for mills. Having three rolls with their axes arranged in triangular reaction to each other, the uppermost roller being yieldingly urged towards the other two lower rolls.

49727. The Walterisation Company Limited. Improvements relating to phosphating compositions, a method of preparing such compositions and the production of phosphate coatings on metal surfaces. (June 18, 1952.) Composition contains acid phosphate of metals and simple fluoride ions.

49728. The English Electric Company Limited. Improvements relating to electric motor control systems. (June 20, 1952.) Includes a speed controlling variable resistance in circuit with the rotor and means for obtaining quantities varying with rotor circuit resistance and torque of the motor and means for keeping their product constant.

JUNE 15.

49729. Council of Scientific and Industrial Research. Improvements in or relating to the solvent extraction of coal. Extracting coal with tar oil at a pressure of 450 to 750 lbs./sq. inch.

49730. Takeda Pharmaceutical Industries, Limited. Vitamin B₁ derivatives and a method of preparing the same. Acylating Vitamin B₁ derivative at nonacidic pH.

49731. National Lead Company. Improvements in or relating to the removal

- of contaminant from titanium metal. By contacting the titanium metal with an acidic solution which contains a ferric salt of a mineral acid or a nitrate compound.
49732. Stamicarbon N.V. Method and apparatus for mixing a pulverulent solid material and a liquid. The apparatus comprises a radially symmetrical chamber provided with opposed axial apertures with liquid feed passage at one end and a conical space outside the feed end, the narrow end of the conical space leading into the chamber through the feed end axial aperture designed to establish a rotating body of liquid in the chamber.
49733. Siemens Brothers and Co., Limited. Improvements relating to multi-channel alternating current telegraph systems. In which frequencies of channels are equally spaced and form a band and at a station between two stations the frequencies of all incoming channels are so modulated that the products of modulation of terminating channels frequencies fall outside the band while the products of modulation of the non-terminating or through channels remain within the band.
49734. Glaxo Laboratories Limited. Improvements in or relating to the preparation of steroid substances. (October 20, 1952.) 11:20-steroid diketones are reacted with a carboxylic acid anhydride in the presence of a solvent and perchloric acid whereby monoesterification takes place at the 20-position.
49735. N. V. "Tervalon". Maatschappij voor Voedingsmiddelen op Wetenschappelijke basis (Scientific food Co.). Improvements in or relating to methods of producing food-preparations. Containing bifidus-active concentrate.
49736. Laporte Chemicals Limited. A process for the manufacture of hydrogen peroxide. A cyclic process for the manufacture of H_2O_2 by the autoxidation of an anthraquinhydrone in a solvent mixture followed by the reduction of the quinone to the quinhydrone is characterised in that the solvent for anthraquinhydrone is an aliphatic ester of a cyclohexanol or of an alkyl cyclohexanol.
49737. Pest Control Limited. A device for use in introducing a predetermined quantity of a systematic insecticide beneath the surface of the soil. (June 16, 1952.) Comprising a shaft at one end of which there is a head consisting of a systematic insecticide coated with a plastic material.
49738. Dr. Ing. E. Breuning. Improvements in or relating to controlling and supervising operation of textile machines, and apparatus therefor. Using a thread sieve constructed as a comb with parallel bars, tubes, rails, the ends of which are free.
49739. H. W. E. Briscoe. Improvements in or relating to a rotary cutter. Comprising a rotatable blade fitted to a formed part of a motor tractor and to be rotated by power generated therein.
49740. N.V.W.H. Van Den Toorn's Industriele Ondernemingen Capsulefabriek "Holland". Capsule for bottles. Consisting of two parts joined together.
- JUNE 16.
49741. Void.
49742. The General Electric Company Limited. Improvements in or relating to apparatus for operating electric discharge lamps. (June 23, 1952.) Fitting containing lamp supports, lamp supply terminals and operating means, provided with a conducting strip electrically insulated from the rest and supported by the fitting to lie closely to the lamp envelope and to extend parallel to and over the greater part of the discharge path between the electrodes of the lamp, the strip being connected to one of the input terminals.
49743. British Insulated Callender's Cables Limited. Improvements in or relating to Fluid Escape-limiting means. (June 26, 1952.) For limiting the escape of fluid from a vessel through an outlet whilst a cable is being hauled towards and then through the outlet by a lead wire of smaller cross-section, consisting of a main outlet sealing gland and an auxiliary sealing gland on the exit side of the main gland.
49744. Glaxo Laboratories Limited. Improvements in or relating to the preparation of new steroid substances. (September 4, 1952.) Reacting compounds of type 3 β :20-diacetoxy-17:20-epoxy-11-ketoallo-pregnane with an organic peracid in inert organic solvent.
49745. F. Graetz. An improved incandescent mantle for gas or gasifying lamps

and process for its manufacture. (May 13, 1953.) Additional substances having a capacity to resist heat are added to known impregnation with thorium and cerium.

49746. C. A. Parsons & Company Limited. Improvements in and relating to combustion turbines. (June 23, 1952.) Regenerative heat exchanger of rotary disc type combined with combustion chamber, burning vapourised or gaseous fuel and rotary flame trap.

JUNE 17.

49747. The Bradford Dyers' Association Limited. Improvements in ornamenting deformable materials. (June 20, 1952.) The design to be transferred on deformable material is carried by a resilient material, the material to be embossed being interposed between the resilient material and a smooth metal surface.

49748. The Bradford Dyers' Association Limited. Improvements in ornamenting deformable materials. (June 20, 1952.) Interposing a stencil bearing the design to be embossed between the material to be embossed and a smooth metal surface.

49749. K. C. D. Hickman. Improvements in or relating to compression stills and method of continuous distillation. The distillation is continuously fed to disk and the vapours are collected.

49750. The British Cotton Industry Research Association. An improved device for measuring the unwinding tension from a textile yarn package. A holder for yarn package, means for drawing-off yarn in combination with a body of heavy mass, resilient mounting means for said body providing resistance to displacement in counterbalance with yarn tension, and means for indicating displacement of the said body whereby a tension indication is available.

49751. The British Cotton Industry Research Association. Improvements in or relating to multiple box looms. (June 19, 1952.) Comprising suction means near the entrance to the multiple shuttle box whereby trails from shuttles not in the picking position are kept in tension.

49752. The British Cotton Industry Research Association. Improvements in or relating to looms for weaving. Means coupled to bottom shaft of the loom being provided to convert continuous rotary

motion of the bottom shaft into intermittent rotary motion, further means to convert intermittent rotary motion, to reciprocating motion and means for imparting said intermittent rotary motion to said drop box.

49753. Standard Telephones and Cables Limited. Apparatus for extrusion of a plastic material. Comprising an extrusion die having a long tapered axially extending channel in which a long tapered tip is disposed, the outer surface and the inner surface are heated by heating means.

49754. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of optically active 3-hydroxy-N-methyl-morphinanes. Splitting racemic 1-(p-methoxybenzyl)-2-methyl-1, 2, 3, 4, 5, 6, 7, 8-octahydroisoquinoline and cyclizing the optically active compound.

49755. Ciba Limited. Process for the preparation of a new acid, its esters, salts and quaternary ammonium compounds of the said acid and its esters. Reserpine is subjected to an alkaline medium and the resulting reserpine acid or esters thereof are isolated and the other derivatives thereof such as salts are prepared by known methods.

JUNE 18.

49756. V. B. Chipalkatti and M. S. Tawakley. Process for dyeing and waterproofing of fabrics. By applying to the fabric, phenolic liquid bhillawanol obtained from bhillawan nuts dissolved in a solvent.

49757. The British United Shoe Machinery Company Limited. Improvements in or relating to the conforming of shoe uppers. The machine has pressing means comprising a pair of members with means for imparting to the members closing and opening movements corresponding to those imparted to the wipers, the arrangements being such that when the wipers have completed their inwiping movements the pair of member will have been closed to positions which enable them to be pressed against the shoe upper just inwardly of the inner edges of the wipers.

49758. The British United Shoe Machinery Company Limited. Improvements in or relating to machines for stacking flexible sheet, material. [Addition to No. 48336] wherein movement of delivery end is initiated by a timing device

49759. Arvey Corporation. Improvements in or relating to process of preparing new compound having pesticidal activity and pesticides comprising the same. A furan is reacted with a hexahalo-bicyclo-[2.2.1] 2, 5-heptadiene according to the Diels-Alder synthesis and if desired the product is epoxidised.

JUNE 19.

49760. H. H. Mansuri, Y. H. Mansuri, N. H. Mansuri, I. H. Mansuri and I. H. Mansuri. Improved loom picker. Having a frame made of light material having a cavity to hold two spaced renewable blocks with axial openings to engage the spindle, the openings and an independent shuttle striking part secured to the leg of the shuttle.

49761. Void.

49762. Dyckerhoff & Widmann Kommanditgesellschaft. Mould for the production of concrete bodies and method for the immediate uncasing of concrete bodies produced in such a mould. Comprising one or more inserts movably arranged within the mould box, each of the said inserts fitting tightly on the rim of a recess of the mould casing.

49763. P. M. Huidobro and J. N. Escobar. A process for the production of an insecticide and regenerator for plants. Producing a mixture of α -pinene and polymerized α -pinene by treating essence of turpentine with sulphuric acid and saturating said mixture with a chlorinated compound.

49764. P. M. Huidobro and J. N. Escobar. A process for the manufacture of insecticidal composition. Treating essence of turpentine with H_2SO_4 , neutralising the liquid with alkali collecting the produced terpene and incorporating it in benzene hexachloride.

JUNE 20.

49765. E. A. Stienen. Improvements in or relating to valves. Slidable plate in a chamber arranged with a clearance with the seat means so as to abut one of them when pressure is exerted on the other side.

49766. Void.

49767. Void.

49768. Laporte Chemicals Limited. A process and apparatus for concentrating hydrogen peroxide. Obtaining equilib-

rium between vapour and liquid in tubes.

49769. "Shell" Refining and Marketing Company Limited. Fuels for internal combustion engines. (June 23, 1952.) Motor fuel containing a minor proportion of a compound of formula MR_n , wherein M is iron or nickel and R is a cyclopentadienyl radical.

JUNE 22.

49770. Void.

49771. Director, Indian Agricultural Research Institute, New Delhi. Improved groundnut planter. The device has a notched plate which receives kernels in its notches and discharges it in the furrower.

49772. Void.

49773. Imperial Chemical Industries Limited. Alkyd based emulsion paints. Comprising dispersion of an air-drying oil-modified alkyd resin in aqueous phase containing protective colloid the resin has acid value of 15 which is reduced by 15 to 35 units during soap formation.

49774. PERFOGIT Societa Per Azioni. Process for the purification of dimethyl terephthalate. Raw terephthalate is converted to vapour and subsequently returned directly to solid state.

49775. W. Schmidt. Process for electrolytic production of titanium. The electrolyte consists of chloride of titanium lower valency than $TiCl_4$.

49776. W. Schmidt. Process for producing aluminium by amalgam metallurgy. Aluminium is extracted by electrolysis through a mercury cathode.

49777. Francesco Vismara Societa Per Azioni. A. Ercoli and R. Justoni. Improvements in or relating to the preparation and purification of cyclopentanopolyhydrophenanthrene ketones. (July 29, 1952.) Reacting cyclopentanopolyhydrophenanthrene ketones with an excess of cyanhydrins.

49778. Francisco Vismara Societa Per Azioni, A. Ercoli and R. Justoni. Improvements in the preparation of 3:17 diols of the cyclopentanopolyhydrophenanthrene series. (July 29, 1952.) The 3-hydroxy-17-ketones are treated with acetone cyanhydrin and the resulting cyanhydrin treated with organometallic compound or with an alkali metal and alcohol.

JUNE 23.

49779. Standard Telephones and Cables Limited. Improvements in or relating to time delay electrical switching apparatus. (September 16, 1952.) Comprising electric and spring clock mechanisms, driving the switch operating means, electromagnetic means for clutching the electric clock, means for disabling the rate regulation mechanisms of the spring clock, means for deenergising the electric clock means for preventing operation of spring clock and means for adjusting the time of travel of switch operating means.

49780. Standard Telephones and Cables Limited. Improvements in or relating to static electric A.C. Switches. (September 26, 1952.) Comprising magnetic core carrying two A.C. windings and means for localised magnetic saturation of the core in such a way that the windings can be inductively coupled and decoupled.

49781. Maschinenfabrik Augsburg-Nürnberg A. G. Improved means for the actuation of stop valves of pressure pipes in pump installations. The stop valve which opens under the action of the increasing pressure of the flow, is removed from the flow area by means of an adjacent lifting and locking device adapted to operate at the same time as the pump drive is switched off.

49782. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of 2-methyl-pyridine-4-carboxylic acid derivatives. Reacting 2-methyl pyridine-4-carboxylic acid derivative which may contain a halogen atom in 6-position with hydrazine or substituted hydrazine.

49783. Void.

49784. M.A.F. Societe Civile D'Etudes Pour Material De Fonderie. Improvement for the remote control of apparatus driven by means of a compressed fluid and compressed fluid distributor particularly utilisable for this control. (November 6, 1952.) Rotative distributors for compressed fluid actuated by adjustable lugs and means for displacing lugs relative to distributors to modifying fluid distribution.

49785. Void.

49786. Bormford & Evershed Limited. Improvements in or relating to apparatus for attachment to vehicle for traversing heaped up material along the

ground. (July 2, 1952.) Blade carried by closed collapsible pivoted linkage comprising four links formed by part of blade, part of a skid and two links.

49787. The British United Shoe machinery Company Limited. Improvements in or relating to apparatus for handling cement. The apparatus consists of a casing providing a chamber in which is rotatably mounted a disc, the chamber walls and the walls of the disc providing a passage, for the adhesive, along a portion of the periphery of the disc connecting the inlet and outlet openings in the casing.

JUNE 24.

49788. Y. Minemura, Z. Kudo, K. Shirakawa, T. Nakajima, I. Sato, N. Seki, Y. Matsumoto, Y. Uchiyama and Y. Iwata. Process for manufacture of crude calcium cyanamide. By suspending calcium carbide particles together with calcium cyanamide above a bed through which nitrogen gas is passed.

49789. Usines Emile Henricot, Societe Anonyme. Improvements in grinding mills. Ball mill lined with studs, wherein studs having their heads at varying distances from the mill axis, are longitudinally grouped in a taper arrangement.

49790. H. List. Improvements in or relating to a rotary valve for controlling the exhaust outlets of two-stroke internal combustion engines. Width of valve face is smaller than the distance between the stub shafts.

49791. Verwaltungsgesellschaft der Werkzeugmaschinenfabrik Oerlikon. Projectile fuse. Comprises a fuse casing, a detonator pin, shock safety means, locking means responsive to centrifugal force generated.

49792. Batu. Building slabs. (March 20, 1953.) Building slab comprises a frame formed with one or more keyways, and reinforcement for locking cement to the frame.

49793. Batu. A slate, blackboard or like writing boards. (March 20, 1953.) Cement or plaster held in keyway of the frame with one surface light in colour and the other of deeply contrasting colour.

49794. L. P. Molnar and R. Wiedmann. Improvements in or relating to the reduction of metallic oxides from ores and concentrates of iron, manganese and

like materials. Wherein a mixture of ore, carbon and fluxing material is subjected during a sustained period to a succession of electrical capacitive and induction type heating in a closed chamber.

49795. Ciba Limited. Process for the manufacture of new amides. Quinoline carboxylic acid HO-Q-COOH is converted to an acid amide of formula $\text{-CON(R}_1\text{)-[CH(R}_2\text{)-(CHR}_3\text{)-O]}_n\text{-R}$.

JUNE 25.

49796. Societe Anonyme Des Etablissements Neu, and Albert Judet De La Combe. Ventilator for agitating air. Wherein the air is blown under pressure into the hub by means of an auxiliary ventilator.

49797. Les Laboratoires Dausse. Process for the production of morphine derivatives. (January 12, 1953.) Reacting alkali metal salt of morphine with a halide of the formula $\text{R}_1(\text{R}_2)\text{-N-CH}_2\text{-CH}_2\text{-X}$ or its hydrohalide under anhydrous conditions in presence of ethanol.

49798. Sudhir Lal Mukherjee and Albert David Ltd. A process for the manufacture of "3:5-Dioxypyrazolidine derivatives." 3, 5-Dioxo-1, 2-diphenyl-4-aryl pyrazolidines are prepared by reacting mono-or di-substituted malonic acid dichloride of the formula $\text{R}_1(\text{R}_2)\text{C(COCl)}_2$ wherein R_1 is aryl and R_2 stands for hydrogen or bromide, with hydrozobenzene.

49799. Dr. P. Halbig. Manufacture of shaped structures from polymers and copolymers of acrylonitrile. Solutions of polymer in nitric acid are wet spun in a coagulating bath consisting essentially of water and nitric acid, said bath being maintained at a temperature of 15 to 70°C.

49800. Standard Telephones and Cables Limited. Improvements in or relating to arrangements for measuring the distortion of telegraph signals. Arrangement for measuring distortion includes means for receiving an electric wave, marking and spacing periods separated by transitions, a plurality of separate indicating devices.

49801. Ciba Limited. Process for the manufacture of compounds of the adreno cortical hormone series. Compounds of the pregnane series which contain in each of the 3-or 16-positions a free or functionally converted hydroxyl or oxo group, in 20-position

an oxo group, and in the 21- position at least one hydrogen atom, are reacted with metal acylates.

49802. Ciba Limited. Process for the manufacture of compounds of the adreno cortical hormone series. By treating 16 unsaturated compounds of the pregnane series with agents capable of adding on to the 16: 17-double bond a compound HO-R , R being hydrogen hydroxyl group, halogen or free or substituted alkyl radical.

49803. Void.

49804. International Combustion (Holdings) Limited. Improvements in or relating to priming devices for centrifugal and like pumps. Priming vessel with tapering tube arranged in line with inlet and outlet apertures and having apertures adjacent larger end.

49805. Davy and United Engineering Company Limited. Method of and apparatus for handling coiled material of strip, web, or filamentary form, in relation to processing means for said material. (June 25, 1952.) Comprises in combination an input bank of arbors, an uncoiling drum, an output bank of arbors, means to convey empty spools to or from the uncoiling and coiling drums.

JUNE 26.

49806. Abbott Laboratories. Improvements in or relating to antiseptic compounds and methods of preparing the same. Acridine compounds prepared by reacting the alkali metal derivative of an alkoxy benzene with an Y-N-substituted acridone, warming the product with an alkanol and treating the resulting compound with an acid.

49807. J. M. R. A. Delourme-Houde. Process for the production of new amino-ethers. (January 12, 1953.) Reacting 5, 8-dihydroxy-2-methyl-4', 5'-furo-6, 7-chromone with tertiary amino lower alkyl halide or its hydrohalide in inert atmosphere.

49808. Y. Minemura, N. Seki and Y. Uchiyama. Process for the production of white calcium cyanamide. Suspending powdery or granular calcium carbonate in a reaction zone in a stream of ammonia gas and maintaining the particles in an agitated state.

49809. B. A. Tarkar. Wick regulating device for stoves and the like. Comprising wick guide tube, a chamber around it, wick holder, wick regulating

means and oil tank surrounding said chamber spaced therefrom and communicating with said chamber through a tube.

49810. Hemphill Company. Improvements in method of knitting. The loop is distended and held taut during the passing through of cylinder needle by projecting sinker nibs so as to exert pressure on the loops of a previously knit course of the fabric.

49811. C. A. Parsons & Company Limited. Improvements in and relating to gas turbines. (July 4, 1952.) Correct temperature level of heat exchanger at desired output maintained by compressor bleed valve and temperature control valve.

49812. Montecatini, Societa Generale Per L'Industria Mineraria E Chimica. Process for the production of hydrogen and carbon monoxide from liquid fuels (heavy Mineral oils.) Characterised in that catalyst is added to oil prior to mixing with steam and reaction temperature is developed by adjusting oxygen in steam.

49813. Davy and United Engineering Company Limited. Improvements in or relating to coiler drums for strip material. (May 21, 1951.) (Divided out of No. 47324, ante-dated to May 20, 1952.) A segmental expansible and contractible coiler drum formed with a slot to receive the strip material and having a pair of jaws, one fixed in one of the segments and the other movable towards the fix jaw.

JUNE 27.

49814. A. L. Gardner. Apparatus for concentrating solar energy. Reflectors, each mounted on individual mounting comprising of focal and sun members, the former rotatable and pointing to fixed focus, and hingedly supporting the reflector while the latter slidably supporting the reflector at one end is secured at its other end to a hinged shifting member movable to follow movement of the sun.

JUNE 29.

49815. Council of Scientific and Industrial Research. A process for the production of improved tan liquors from vegetable tanstuffs. Soaking the vegetable tanstuffs in water, leaching to obtain tan liquor and adding to said

liquor or stuff during leaching, oxalic acid and sodium bisulphite with or without the addition of formic acid.

49816. Walther & Cie. Aktiengesellschaft. Furnace plant. (July 17, 1952.) [Addition to No. 44592.] In which the baffle has a shape which has its greater diameter in the mid portion and tapers both upwardly and downwardly.

49817. The Firestone Tire and Rubber Company. Improvements in or relating to tubeless tyre. Having air impervious chaffing strips.

49818. Harry Ferguson Limited. Improvements in or relating to steering mechanisms for tractor-drawn implements. (July 8, 1952.) Soil engaging element on implement and steersman-actuable means interact to cause lateral swing of the implement with respect to the tractor.

49819. Weir Valves, Limited. Improvements in isolating valves and valve assemblies. With a stuffing box on the domed end of the body and an internal piston type closure member detachably fitted into the open end of the body.

49820. J. M. Cooper. Improvements in or relating to the bottling of soft drinks. Filling the bottle with measured quantity of soft drink which makes a proper drink when the remaining part of bottle is filled up with water.

49821. The British Drug Houses Limited. Improvements in or relating to the purification of esters of chloramphenicol. (July 7, 1952.) Contacting the crude esters in an inert solvent with activated alumina.

JUNE 30.

49822. Walther and Cie. Aktiengesellschaft. Improvements in and relating to pulverised fuel furnaces. (November 11, 1952.) An auxiliary burner is provided between each two main burners and the suspended ash is blown in at the same level and in the same direction as the air-fuel mixture of the auxiliary burner.

49823. Crittall-Luxfer Limited and Fielding & Platt Limited. Improvements in or relating to apparatus for extruding metal. Comprising a hydraulic apparatus including a ram and a cylinder, a die with a operative face clear of obstruction, means for maintaining the billet in operative position, a pressure fluid accumulator for storing fluid under a predetermined pressure.

49824. The Firestone Tire & Rubber Company. Improvements in or relating to method and apparatus for measuring the moisture content of fabrics. Wherein one pole of a ripple free D.C. source isolated from earth is connected through a length of the fabric to earth, the other pole of said source being connected to earth through a fixed resistance, the potential difference across said resistance being a function of moisture content.
49825. Xetal Products Limited. Method of producing resilient upholstery and shock absorbing materials by bonding resilient fibres and resilient fibrous material so produced. Reacting *in situ* on fibres a polyester and an organic polyisocyanate or polyisothiocyanate.
49826. The Dayton Rubber Company. Textile cot. Drafting cot having surface of vulcanised oil resilient synthetic rubber material mixed with soft, porous and fibrous shells of nut like material.
49827. Combustion Engineering, Inc. Improvements in or relating to a steam purifying apparatus and method of obtaining purified steam. By whirling the mixture of steam, water and foam through a spiral flow within a drum and then passing through clean washing water.
- JULY 1.
49828. Demag Aktiengesellschaft. Blowing installation for the production of steel. Oxygen is blown into molten metal by means of a lance which is bent so as to be moved into and out of the converter on a curved path.
49829. Void.
49830. Automatic Telephone & Electric Company Limited. Improvements in registering and translating circuits for use in telecommunication systems (July 9, 1952.) Digits are stored and tested by electronic means in a telephone translating circuit.
49831. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to magnetic cores. Core is made up of at least two layers of ferromagnetic ferrite material, at least one of the layers consists of a material having a temperature coefficient of permeability which is different from that of the material of at least one of the other layers.
49832. K. Sakamoto. Improvements in a shuttle box and a picker of a cop-change power loom. A front plate fixed to the lathe end at its outer part only leaving a clearance under the front plate, a picker with side wings at its top and guide bars fixed to the guard plate and to the front plate of the box.
49833. K. Sakamoto. Improvements in a searching device for exhaustion of the weft yarn on a cop in a power loom. Providing a locking device to lock the feeler arm when the loom is not in normal operation and rendering the locking device inactive when the loom is in its normal operation.
49834. Unilever Limited. Improvements in soap compositions. (July 17, 1952.) Comprising soap, non-ionic detergent and surface active, non-ionic, substantially non-detergent compound.
49835. The Jay Engineering Works Ltd. Regulators for A.C. fans. Number of turns of copper is fixed but the reluctance of magnetic circuit is variable.
- JULY 2.
49836. Council of Scientific and Industrial Research. Manufacture of ether. Comprising vapour phase catalytic dehydration of alcohol using a fluidized catalyst bed consisting of a compound of aluminium at 200—250°C.
49837. Council of Scientific and Industrial Research. Production of pink enamels. Manganese dioxide is used as colourant.
49838. Council of Scientific and Industrial Research. A process for improving the storage life of cashew kernels. Roasting cashew nut kernels with hydrogenated groundnut oil.
49839. Council of Scientific and Industrial Research. A process for the production of a concentrated base from groundnut kernels to provide a base in of food products. Roasting and grinding groundnut kernels to provide a base in which the proportion of protein to fat can be varied for making a food.
49840. General Electric Company Limited. The Improvements in or relating to pressure welding. (July 11, 1952.) Void after publication. Cold pressure welding together a pair of pressure weldable members by placing those members together between a pair of facing tool surfaces, at least one of

which is strip like, and causing relative movement of surfaces in a direction generally parallel to the surfaces.

49841. Imhausen Werke GmbH. Improvements in or relating to the production of derivatives of aromatic polycarboxylic acids from alkylaromatic compounds. Converting difficultly oxidisable intermediate oxidation products of alkylated aryl compounds with oxygen into easily oxidisable functional derivatives thereof for further oxidation.

49842. Metropolitan-Vickers Electrical Company Limited. Improvements relating to apparatus for indicating and/or controlling a dimension of articles moving in the direction of such dimension. (July 24, 1952.) Including two detectors for producing electric pulses in response to the passage of leading and trailing edges of the article through two pre-determined locations.

JULY 3.

49843. International Business Machines Corporation. Circuits for electronic counters or the like. (February 13, 1953.) Comprising a pair of transistors, each with a base, a collector and an emitter electrode, the emitter-base paths being serially connected and means for applying voltages to the electrodes including a load impedance connected to one of said collector electrodes.

49844. S. Junghans. Method of continuously casting metals. Casting jet is introduced into the liquid casting head with a constant change of the point to which it is directed.

49845. Lawler, Ayers & Company Limited. Improvements in bending machines for tubes, rods, bars or the like. (July 3, 1952.) Comprising a mounting having a upright spindle, a bending former supported on the spindle, a bifurcated lever embracing the bending former and carrying a presser roller.

49846. Courtaulds Limited. Improvements in and relating to the production of artificial threads, fibres, filaments and the like. Extruding a solution of polyacrylonitrile dissolved in a solvent mixture consisting essentially of water, a water-miscible diluent and one or more highly water-soluble salts while maintaining the concentration of the salt and diluent in said bath below that at which spinning breaks down.

49847. Shivaji Works Limited. Improvements in or relating to chaff cutter machines. Comprises a guillotine knife or blade supported at both its ends.

JULY 4.

49848. Sambhu Kumar Paul. A cutting device. Comprising a thumble with a cutting blade mounted thereon.

49849. Dunlop Rubber Company Limited. Foamed latex products. (July 15, 1952.) Gelling the latex in the presence of an organic hydroxy compounds.

49850. Parks-Cramer Company. Travelling loom cleaner apparatus. A casing mounted on the frame, a nozzle connected to the casing, a fan in the casing and a motor therefor acting during the travel of the cleaner along the track and means to oscillate the nozzles.

JULY 6.

49851. Council of Scientific and Industrial Research. Recovery of hydrochloric acid gas from unreacted chlorosulphonic acid in the manufacture of aromatic sulphonyl chlorides. The reaction mixture is passed into an acid or a solution of metallic chlorides or sulphates containing enough water to decompose excess chlorosulphonic acid.

49852. Council of Scientific and Industrial Research. Manufacture of azo dyestuffs from cashew shell liquid derivatives. A hydrogenated phenolic component of cashew shell liquid is coupled with an aromatic diazonium salt in the presence of an alkali.

49853. Texaco Development Corporation. Improvements in or relating to process for pulverizing solid materials. [Addition to No. 42012.] Condensing the dispersion to reform a slurry of disintegrated particles in the liquid, and again passing reformed slurry along the elongated path to further reduce the size of the particles.

49854. Imperial Chemical Industries Limited. Improvements in or relating to ventless delay electric initiators. (August 1, 1952.) Deflagrating composition of electric fusehead having a coating consisting at least in part of ethyl cellulose.

49855. The Monotype Corporation Limited. Improvements in or relating to pump mechanism for type casting machines. Elevating levers are given

an accelerated movement by their operating springs during the final stage of their travel to seat the pump nozzle in the mould slightly in advance of the operation of the pump piston.

49856. C. A. Longley. Improvements in or relating to cementitious materials. Finally grinding gypsum or anhydrite and adding thereto a proportion of a composition conferring setting properties, and prepared by mixing potash alum, borax and anhydrite and adding sulfuric acid to the mass.
49857. The consolidated Mining and Smelting Company of Canada Limited. Process for the production of ammonium sulphamate. By reacting ammonia and sulphur dioxide above 100°C and under a superatmospheric pressure of ammonia.
49858. The Consolidated Mining and Smelting Company of Canada Limited. Production of guanidine sulphamate and/or melamine. By reacting a mixture of urea ammonia and sulphur dioxide at temperature above 220°C .
49859. Nilratan Bose, Bimal Kumar Ghosh and Rabindra Nath Das. Improvements in or relating to plane tree rollers for jute spinning machines. Rollers being made of laminated wood.
49860. J. Stone & Company (Deptford) Limited. Improvements relating to pole-changing switches for dynamo-electric machines. Comprises mechanically acting switch having frictional coupling arrangements to transmit positive drive from the shaft to the switch.
49861. Flexipac Limited. Improvements in or relating to collapsible containers. The moulding and welding is effected by high frequency electric heating.
49862. E. G. Fussell and C. B. Champion. Improvements in or relating to heel top pieces for boots and shoes. The top piece has a metal reinforcement in the form of an arcuate treating portion extending around the back of top piece and also has an recessed flange.
49863. May & Baker Limited. Improvements in or relating to tetrazolium compounds. (July 17, 1952.) Oxidising a formazan of the formula $\text{R}_2\text{-NH-N}=\text{C}(\text{R}_1)\text{-N}=\text{R}_3$.
49864. D. A. Freeman. Garment pressing machine. Having a pair of cooperating pressing elements capable of being held in a preliminary closed position and of being moved into pressing engagement.
49865. The Plastic and Industrial Corporation Limited. Improvements in or relating to containers and lids therefor. Wherein lid has inside thereof one or more ledges or ribs like protuberance separated by one third the distance of circumference of the lid.

JULY 7.

49866. The Mining Engineering Company Limited. Roof supports. Comprises a roof support, an energy storing device and means to release the energy when required.
49867. The Mining Engineering Company Limited. Roof supports including chock structures. Comprises a resilient supports adapted to be compressed, means for locking the support which is releasable.
49868. The Mining Engineering Company Limited. Roof supports. Comprises hollow ram as a fluid reservoir operating in a cylinder, a relief valve and a hydraulic accumulator.
49869. Crittall-Luxfer Limited. Improvements in a method for extruding metal sections. Forcing a cold metal billet through a die, severing the thin discard from the extruded section, holding the extruded section and applying a tensile force parallel to the direction of extrusion.
49870. Crittall-Luxfer Limited. Apparatus for extruding metal sections. Comprising a ram, a die providing an operative face clear of obstruction, means for maintaining a slug of metal to be extruded, means to drive the ram, and a mechanical gram to grab the extruded section.
49871. Parke, Davis & Company. Process for the production of 1-phenyl-2-dichloroacetamido-1, 3-diol compounds. Reacting dialkyldichloroacetylphosphite or arsenite with an amino diol.

JULY 8.

49872. Mrs. Subhadra Balwant Pandkar. Bread container. With perforated plate under the cover lid having another perforated plate, there being also another perforated plate having a rim at the bottom of the bread container.
49873. Power Jets (Research and Development) Limited. Improvements in or

relating to control arrangements for rotary machines. (July 22, 1952.) Combination of means for producing a fluid pressure proportional to the rotational speed and a trip device proportional to the fluid pressure.

49874. The Mond Nickel Company Limited. Improvements relating to the heat-treatment of nickel-chromium-cobalt alloys. (July 9, 1952.) The heat treatment is carried in three stages at three different temperatures.

49875. The Mond Nickel Company Limited. Improvements relating to nickel-chromium-cobalt alloys. Containing 4 to 12 per cent chromium, 10 to 55 per cent cobalt, 0.5 to 8 per cent titanium, 0.3 to 8 per cent aluminium, 0 to 15 per cent molybdenum, 0 to 0.5 per cent carbon, 0 to 0.01 per cent boron, 0 to 0.2 per cent zirconium, the balance being nickel.

JULY 9.

49876. Haco-Gesellschaft A. G. New thiosemicarbazones and a process of making same. An aldehyde or ketone of the formula $R\text{-Yn-O-X.CO.R'}$ is reacted with a thiosemicarbazide, $H_2N\text{-NH-CS-NHR''}$, R, R' and R'' being hydrogen or hydrocarbon radical, X being unsubstituted aryl radical or aryl radical substituted by alkyl and/or alkoxy radicals or halogen, n meaning any integer and Y meaning an alkoxy radical.

49877. G. L. M. Judd. An improved pipe joint. (August 16, 1952.) Void after publication. Consisting a split connecting band that encircles the end of the socket and defines with the socket and the spigot an annular cavity and a resiliently flexible gasket confined within the cavity.

49878. Void.

49879. Western Electric Company Incorporated. Semi-conductor signal translating devices and circuits employing such devices. (August 8, 1952.) The semi-conductive material having a region of intrinsic conductivity wherein electric charge carrier of one sign are injected and received and electric charge carriers of opposite sign are injected for controlling the injection of first mentioned electric charge carriers.

JULY 10.

49880 Council of Scientific and Industrial Research. Improvements in or

relating to the manufacture of prestressed concrete. Steel members initially precompressed by removable steel cables and replacing precompression at later stage by dead weight of structure and permanent loads.

49881. Master A. B. Saval. Medicinal ointment. Comprising Henna leaves, Common salt, Unnab, sodium carbonate and molasses.

49882. International Physical Establishment. Process and apparatus for treating particles distributed in a liquid with mechanical vibrations, more particularly for artificial crystallization. Liquid is subjected to sonic or supersonic vibrations.

49883. E. Bobkowicz. Yarn production. Bonding the staple fibers together by a thermoplastic and/or thermosetting bonding agent prior to spinning.

49884. E. Bobkowicz. Bast fiber liberation. Split stalks are flexed to loosen the bark, the wood is then cut transversely without cutting the bark and the resulting bark scraped.

49885. E. Bobkowicz. Textile fabric. The warp and weft yarns being welded together at contact points by heat activated bonding agent.

49886. Hoover Limited. Improvements relating to electric irons. Including sole plate carrying flash boiler, handle, and cover shell surmounting the sole plate, reservoir communicating with the boiler through a valve to supply water, a filter tube on top of the reservoir and with a forwardly facing filling opening, and a water port and a venting port opening into the reservoir.

49887. Hoover Limited. Improvements relating to electric irons. [Addition to No. 46950.] Reservoir-valve sub-assembly rests on sole plate sub-assembly at a pressure-contact joint near the toe of the iron and communicating between the reservoir and boiler, and at other points, and the two said sub-assemblies are held to handle-cover-shell sub-assembly by single clamping means at an intermediate point.

49888. Farmaceutici Italia S. A. Process for preparing d-N-N-diethyl-N' (2-tetrahydro-1, 2, 3, 4 naphthyl) glycin amide, and products obtained d, l, N, N-diethyl-N' (2-tetrahydro, 1, 2, 3, 4-naphthyl)-glycinamide is resolved into its optical isomers by means of salification with optically active acid and fractional crystallization from solvent.

49889. The Murphy Chemical Company Limited. Manufacture of insecticidal compositions containing organic phosphorous compounds. (July 11, 1952.) Comprising bisdimethylaminofluorophosphine oxide together with an amide or ester or mixed amide ester of orthophosphoric acid.

JULY 11.

49890. Void.

49891. V. Sundaram. A device for making sugar floss or wool. Comprising a cage having slots formed in its walls, mounted on a revolving platform and means for heating the cage.

49892. The Chloride Electrical Storage Company Limited. Improvements in the manufacture of microporous material. (July 17, 1952.) Sheet consisting of thermoplastic material a solvent a substance of fine particles is subjected to mechanical work after removal of solvent.

49893. H. List. Device for reversing; the direction of rotation of internal-combustion engines, more particularly of two stroke internal-combustion engine with fuel injection. Rotary pistons of the drag couplings are reversed by admitting compressed air to it and retained in position by means of pressure oil from the circulating lubricating system.

JULY 13.

49894. Imperial Chemical Industries Limited. Improvements in or relating to the production of liquid explosive nitric esters. (August 27, 1952.) By emulsifying wash waters with a stream consisting predominantly of a liquid non-explosive aromatic nitro-hydrocarbon.

49895. Dunlop Rubber Company Limited. Improvements in conveyor systems. Comprising an endless conveyor having a plurality of articles-supporting portions, a movable discharge device above the conveyor and means for moving the device away from or towards the conveyor.

49896. Compagnie Generale Des Conduites D'Eau. A process for the enrichment of cast iron with manganese. Cupola being charged with materials containing silicon such that on adding manganese containing substance and melting the whole while maintainig in

the cupola a column of slag of substantial height.

49897. Broom and Wade Limited. Improvements in or relating to fluid feed control for rock drills. (July 18, 1952.) Comprises a conduit with a throttle valve and means for controlling it.

49898. E. I. Du Pont De Nemours and Company. Sulfonamidophenylamido-1, 3-propanediols and their preparation. Reacting an amine with flourosulfonylphenylamido-1, 3-propanediol.

49899. Void.

49900. J. Stone & Company (Deptford) Limited. Improvements relating to the magnet systems of electromagnetic regulators, relays or the like. (July 14, 1952.) Consisting of a core composed of longitudinally grain-oriented magnetic strip material and having an open gap for co-operating with the moving element of the regulator, relay or the like.

49901. H. Ingold. Apparatus for stering articles such as books. Comprising open sided displaceable containers assembled in rows, through service aisle of which an endless band runs to which containers can be attached through connecting means.

49902. Jarolux A. C. Apparatus for heat treatment of parts of the body, such as drying of hair, and the like. A flexible casing covers the body and hot air is supplied to the casing.

49903. Hamol A.-G. Process for the preparation of a new aldehyde derivative such as N-hydroxymethyl-methionine and salts thereof. (May 4, 1953.) Reacting methionine with formaldehyde in alkaline solution at a pH of at least 7.

49904. Void.

JULY 14.

49905. D. D. Harrison, E. Seel and N. Harrison. Building structures. (July 31, 1952.) Adjacent ends beam parts connected by upper and lower plates clamped by a bolt; compression strut seated against bottom plate and held in compression by tensioning filaments extending transversely in the direction of the beams.

49906. D. D. Harrison, E. Seel and N. Harrison. Building structures. (April 15, 1953.) Beam connecting plate with transverse projections and central boss on opposite sides and webs integral with

boss and plate extending radially towards the projections.

49907. Tecalemit Limited. Improvements relating to rotary piston meters. (August 6, 1952.) Means to adjust volumetric accuracy of the meter externally without disconnecting the mechanism.

49908. U. Spiscopo. Improvements in or relating to building blocks and their manufacture. Comprising a closed shell which form all the sides of a block and has one or more integral reinforcing diaphragms, the shell together with the diaphragm forms a monolithic structure.

49909. O. V. Kohorn. Improvements in or relating to the production of cellulose materials. Subjecting cellulosic material to a mechanical decorticating operation for breaking the fibre bundles, producing an aqueous slurry of said decorticated fibres acid subjecting the slurry to a violent agitation to separate the pith from fibres without reducing the length of the fibres.

49910. Stamicarbon N. V. Method of and apparatus for removing solid or liquid particles from a gas. Feeding the gas into a rotation chamber, the chamber feed aperture area and the rate of feed of the gas being such that a vortex is established in the chamber from which vortex the mist particles are precipitated.

49911. Compagnie Generale De Telegraphie Sans Fil. Improvements in or relating to ultra high frequency travelling wave oscillators. Including a delay line which has its two ends uncoupled and a load circuit coupled with the delay line near the source of the beam

JULY 15.

49912. The English Electric Company Limited. Improvements relating to electric motor control systems. (July 18, 1952.) Means for automatic acceleration and automatic deceleration provided in the system.

49913. A. D. Young, G. M. Lilley and R. Westley. Improvements in or relating to jet noise suppression means. (July 25, 1952.) Nozzle outlet is constrained and arranged to increase the perimeter of the issuing jet.

49914. Monsanto Chemicals Limited. Improvements relating to the pelleting of substances in finely divided form. (July 17, 1952.) Mixing with aqueous

dispersion of aliphatic hydrocarbon of high viscosity.

JULY 16.

49915. Void.

49916. Compagnie Generale De Telegraphie Sans Fil. Improvements in or relating to travelling wave magnetron tubes. Delay line divided into two sections, first of which is negative electrode opposite to positive electrode with no delaying properties, the latter being in alignment with second section of the delay line which is the positive electrode situated opposite negative electrode with no delaying properties and in alignment with the first section.

49917. A. P. Smith and Drake and Fletcher Limited. Improvements in and relating to the control of flow of powdered material through an orifice. (July 17, 1952.) Hopper from which powder falls under gravity to a duct adapted to emit a stream of air with means for directing a flow of air into powder adjacent the outlet of hopper.

49918. The K. C. P. Limited. The manufacture of articles of food and confectionary. Containing a central filling of sugar, liquid glucose and yeast processed under heat and vacuum.

49919. D. P. Pavri. Improvements in or relating to clamps. Providing a locking screw which passes through one of the spring loaded operating arms of the clamp.

JULY 17.

49920. Void.

49921. The Chloride Electrical Storage Company Limited. Improvements relating to the manufacture of micro-porous material. (July 17, 1952.) A thermoplastic material, a pore forming material, a solvent and a liquid incompatible with the thermoplastic material form of the micro-porous material.

49922. Standard Oil Development Company. Improvements in or relating to the production of petroleum products boiling in the motor fuel boiling range. The reduced crude containing gas oil constituents is catalytically cracked between 850 to 1000°F.

49923. Void.

49924. Compagnie Generale De Telegraphie Sans Fil. Improvements in or

relating to short wave directional aeri-als. (June 12, 1953.) Having a feeder at one end and being constituted by metallic parts spaced apart from one another by a quarter wavelength and disposed behind one another, the greatest dimension of these parts increasing rapidly in the direction away from feeder end, up to a maximum and thereafter decreasing slowly, to define a cigar-shaped antenna.

49925. Duurand & Huguenin A.-G. Process for the manufacture of salts of sulphuric acid esters of leucovat dye-stuffs of the anthraquinone series. Treating the vat dyestuff in a mixture of a picoline and methylene-bis-(N:N-diethyl-cyclo-hexylamine) with chloro-sulphonic acid in the presence of cata-lysts.

49926. Olympia Werke West G.m.b.H. Improvements in or relating to type-writers. (February 25, 1953.) Wherein bell ringer mechanism, line-lock and keylever stop mechanism are mounted on a common base plate, forming a structural unit connected to the frame of the typewriter.

49927. Imperial Chemical Industries Limited. Copolymers of styrene and an epoxide compound and esters thereof. (August 13, 1952.) Copolymer contains 60—90% by weight of styrene and di-allylether monoxide the copolymerisa-tion being effected through the olefinic linkages.

JULY 18.

49928. Baker Platinum Limited. Im-provements in or relating to extrusion nozzles. (July 25, 1952.) Consisting of holes comprising of a gradually and continuously converging inlet portion merging with an intermediate portion converging at an increasing rate, said intermediate portion merging with a cylindrical outlet.

49929. K. F. Finn. Clamping wrench. Having a member for controlling rota-tion of the worm and means for perma-nently interconnecting the former with the latter.

JULY 20.

49930. Schering A. G. X-ray contrast media. Reacting 2:4:6-triiodo-3-amino benzoic acid with acid halides, or with ester acid halides of polybasic carboxy-lic acids.

49931. Compagnie Generale De Tele-graphie Sans Fil. Improvements in or relating to electron signal storage tubes. (March 25, 1953.) Of the kind utilising the secondary electronic emission pro-perties of an insulating substance under the impact of a beam of electrons to re-tain on the surface of the substance an electrical image of a signal.

49932. Void.

49933. Schlage Lock Company. Improve-ments in or relating to door closer. Comprising a body having a cylindrical bore with a piston which divides it into chambers and connections for moving said body and piston relative to the movement of the door.

49934. Imperial Chemical Industries Limited. Improvements in or relating to resinous polyhydric alcohols. (August 20, 1952.) Resinous compositions, useful for the preparation of coating composi-tions, comprise a resinous polyhydric alcohol and an organic polyisocyanate.

49935. (Mrs.) Nancy Hobson. Improve-ments in or relating to adjustable bracket supports. Comprising a suppor-ting member carrying projecting brackets, either the supporting member or the bearer member having channel or slot wherein one or the other can slide.

49936. N. V. Philips' Gloeilampenfabrie-ken. Improvements in or relating to low-pressure mercury vapour discharge lamps. Coated on the lamp wall with a luminescent material made from red luminescent magnesium arsenate in which the ratio between magnesia and arsenic pentoxide lies between 4:1 and 10:1 and activated with manganese be-tween 1×10^{-3} and 10×10^{-3} atom per magnesium atom and with another lu-minescent layer on said luminescent material.

49937. H. Wynmalen and J. W. Powell. Improvements in or relating to pre-fabricated building structures. (July 21, 1952.) Sheet panel bent into angle section and angle section plate, secured in nesting relationship on outside of panel and having returned free side marginal edges allowing insertion of edges of adjoining cladding units.

49938. Carbodies Limited. Apparatus for operating a pivoted member (e.g., An arm of a mechanism for raising and lowering a window or a drop head of a motor car.) (August 14, 1952.) The

pivoted member includes a bell crank lever which is acted upon by a double acting hydraulic piston and cylinder arrangement.

49939. Powers-Samas Accounting Machines Limited. Improvements in or relating to statistical machines (September 29, 1952.) Comprises a pair of rotatable feed rollers co-operating to move a card into engagement with a deflector directing the leading end of card.

49940. E. C. E. Hemsted. Improvements in and relating to medically-active materials, and to tampons, wads or the like made therefrom. (July 22, 1952.) Comprising light compressed soluble or dispersible fibres impregnated with prophylactic or therapeutic chemicals.

49941. Ciba Limited. Process for the manufacture of new piperidines. 2-diphenylmethyl-pyridine is treated with a hydrogenating agent.

49942. Western Electric Company, Incorporated, Voice-frequency signalling systems. (January 8, 1953.) Comprises amplifiers and guard tuned net works being antiresonant, rectifiers and electronic relays.

49943. Zaidan Hojin Sekitan Sogo Kenkyujo. Method for recovering germanium. Subjecting gas liquor obtained from carbonization of coal to oxidation to form a precipitate and recovering germanium from the precipitate.

JULY, 21.

49944. Void.

49945. Heyden Chemical Corporation. Improvements in antiseptic detergent composition and process of making the same. Comprising detergent and neomycin.

49946. PERFOGIT Societa per Azioni. Process for the production of 11-bromo-undecanoic acid. Reacting undecilenic acid with HBr in presence of a peroxide and absence of free oxygen.

49947. PERFOGIT Societa per Abioni. Improvements in the spinning of synthetic linear polymers. Extruding and winding in atmosphere of relative humidity not higher than 50 per cent.

49948. The British Cotton Industry Research Association. Improvements in or relating to weft selection mechanism for looms. (August 1, 1952.) A series of trip levers one for each shuttle box, each lever controlling the change release mechanism, electric means

operated by each weft feeler mechanism, and cam means for acting the trip lever.

49949.—Void.

49950. Wilkins and Mitchell Limited. Improvements in washing machines. (August 18, 1952.) Wherein the impeller is formed on its underside with an annular channel into which liquid is forced by centrifugal action and then drawn off therefrom by its own momentum.

49951. American Cyanamid Company. Improvements relating to new salts of polyesters of aliphatic sulfadicarboxylic acids. (March 16, 1953.) Condensing fatty acid mono or diglycerides with an esterification product of (a) polyoxyalkylene glycol and (b) ethylenically unsaturated dicarboxylic acid or anhydride thereof and reacting the resulting polyester condensation product with a bisulfite or meta-bisulfite.

49952. Void.

49953. Werkspoor N. V. Improvements in and relating to sugar cane mills. Characterized in that one of the side edges of the recess in the housing has groove at its outer side and the other at its inner side in which corresponding projecting edges of grooves at the side of the cap facing the housing engage.

49954. Haniel & Leug G.m.b.H. Discharge pumps of the air-water mixture type. The point at which air and water are separated from each other in the separator and the separator itself are arranged at the depth of the conveying pipe.

JULY, 22.

49955. Prince-Smith & Stells Limited. Improvements in centrifugal spinning machines. (August 26, 1952.) A rotary container, a guide for leading stock into the container, a bobbin support, means to propel the bobbin into the container.

49956. The Chesterfield Tube Company Limited. A method and means for use in the production of metal bars, rods, tubes or the like by extrusion. (August 11, 1952.) Work piece automatically detached from head of billet by a severing means contained in and movable relatively to hollow extrusion ram.

49957. T. Hindmarch. Improvements in or relating to fluid pressure operated friction clutches, brakes or couplings.

(August 13, 1952.) Rate of engagement or disengagement and/or torque carrying capacity controlled by means controlling passage of fluid from one chamber to other or chamber to chamber expansible under fluid pressure.

49958. Ames Irrigation Pty. Limited. Improvements in or relating to pipe couplings. Having a male coupler member with an enlarged end and a female member with a socket, the said socket having a tapering wall and also having contractible ring and a gasket for tight coupling.

49959. Unilever Limited. Apparatus for controlling dictating machines. (August 28, 1952.) Apparatus comprises a remote controller at the dictators telephone set and a main-station controller responsive to the switching signals of the remote controller.

49960. Ciba Limited. Process for the manufacture of new bactericidal and fungicidal compounds, and preparations containing them. By reacting a tertiary amine with a benzylating agent or with an aliphatic compound of the formula $R-X$ or with a compound of the formula $X-R_2-OH$.

JULY 23.

49961. Ford Motor Company of Canada, Limited. Hydraulic torque transmitting device and method of manufacturing the same. Angularly spaced blades with projecting tabs and shroud with openings for tabs and deformable tongues struck out adjacent openings to engage tabs and retain shroud and blades assembled.

49962. Void.

49963. Aerocem Limited. Improvements in or relating to mixing machines. The base of the container is so shaped as to guide the flow of the mix downwardly about the axis of the container.

49964. Timsons Limited and E. A. Timson. An improved machine for printing upon or otherwise treating webs of flexible sheet material. (July 24, 1952.) Includes two laterally spaced sides of a main framework, treating units, means for drawing webs or sheet material past the treating units and delivery mechanism.

49965. F. R. Williams and Easipower Limited. Improvements in or relating to smoothing irons. Comprising a sole plate having a high coefficient of ex-

pansion, and a low expansion element operatively connected to sole plate.

49966. Sutter Products Company. Improvements in or relating to machines for automatically making shell moulds (May 19, 1953.) Automatically making shell moulds having a displaceable oven, a pattern carrying assembly, mechanism to move the assembly from upright to an inverted position mechanism operable in its inverted position, means for maintaining the assembly at a predetermined temperature, control means for actuating mechanism.

49967. F. Pischek and J. Horak. Ratchet device for threadings such as for bolts and screw-heads in general. Two plates juxtaposed, one has means for anchoring to base plate while the other plate is the key one possessing groove means.

JULY 24.

09968. Sawan Singh. Automatic pressure water pump for wells. Well shaft with air tight closure intermediate its ends and pipes passing through closure and extending below water level, space enclosed between closure and water being charged with compressed air.

49969. International Business Machines Corporation. Improvements in record controlled accounting machines. (March 12, 1953.) There are provided devices for ascertaining the sign of each amount prior to entry and for causing inversion of the amount in the accumulator.

49970. The English Electric Company Limited. Improvements in and relating to spinning machine drives. (August 8, 1952.) Comprising in combination an a.c. motor in which the speed depends on the frequency of the supply source, a frequency changer and switch means effective to connect the motor to the low frequency supply source.

49971. Dunlop Rubber Company Limited. Apparatus for the production of metal pieces of predetermined length. Comprising cutting means, feeding means, means for operating the cutting means while it is moving in the feed direction and means for resetting the cutting means during said travel.

49972. Schlumberger Well Surveying Corporation. Induction well logging apparatus. Includes a column of conductive liquid and the combination of an elongated support with an electric coil.

JULY 25.

49973. Void.

49974. Imperial Chemical Industries Limited. Cord-like ignition devices for explosive charges. (September 22, 1952.) Comprising a combustible flexible envelope confining together therein at least one incendiary element and at least one wick element and having continuous air spaces along its length.

JULY 27.

49975. Void.

49976. Goodyear Aircraft Corporation. Ejection seats, in particular head shields thereon, for airplane occupants. In combination with the ejection device a rigid protective enclosure substantially defining the position of the occupant's head.

49977. Ford Motor Company of Canada, Limited. Latch mechanism for motor vehicle doors. Having a rotatable bolt, a rotatable ratchet, a manually actuated operating lever, a locking lever and a remote control lever.

49978. Ford Motor Company of Canada, Limited. An internal combustion engine valve gear and a method of installing a seal therein. An elastomer seal is provided on the stem of the valve.

49979. Dunlop Rubber Company Limited. Improvements in shock absorbers. (August 16, 1952.) Shock absorber comprises a tubular inner member an outer coaxial hollow section telescopic member and a hollow section rubber cushioning element compressible between the inner and outer members.

49980. O. Hinze. Sectional falsework supports for use in building construction. Elements each having upper and lower chords and connection therebetween, two neighbouring elements having thrust bearing faces abutting in the line of their upper chords and linked in the line of lower chords through continuously variable adjustable means.

49981. G. Brooks. Medicinal dose computer. (July 28, 1952.) Comprising a table of dosages marked on a surface with respect to two coordinates and means slidable relatively to the said surface.

49982. Carbodies Limited. Stowing a drop-head of a motor car body. Seat

back sustaining means operates to resume the back to its normal position when pressure is applied to it.

49983. Union Sils, Van De Loo & Co. Improvements in hubs for wheels and method of manufacturing them. (February 17, 1953.) In which the spoke flanges are formed integral with the ball bearing race shells by deformation of the material to present a thickening of the material on the walls of the race shells.

49984. P. J. Packman. Improvement relating to the manufacture of small objects. (July 28, 1952.) In the series of stages of manufacture the objects are attached individually to a strip of flexible material which is led through the stages of manufacture so as to convey the objects one after the other through said stages.

49985. Lonza Electric and Chemical Works Limited. Production of closed-cell, gas-containing cellular bodies. Incorporating in a pasty elastomer or thermoplastic plastic resin a difficulty condensable gas under pressure, heating and gelatinising, cooling, relieving the pressure on the gas treated starting materials.

49986. E. M. Hunnebeck. Improvements relating to temporary supports and centerings. (April 16, 1953.) Comprising an outer girder which rides on an inner girder having the same carrying power as the outer girder, the outer girder having a support for the inner girder which support is arranged at a distance from the end of the outer girder which is double the height of the outer girder.

49987. Societa Forni Lubatti. Improvements in or relating to electrodes for auto-resistance electric furnaces. With a spherical head of carbonaceous material into which passes an electrically conductive arm through which passes a tube for cooling liquid to pass, a large zone of the head surrounding the aperture through which the arm enters, being insulated electrically and thermally with an insulator cap which extends around the end part of the arm into a cylindrical wrapping which is also thermally and electrically insulating.

JULY 28.

49988. David Etchells and Son Limited. Improvements in oil-burning furnaces. (August 11, 1952.) Atomising nozzle assembly feeds the fuel into the bore

- of a tubular member of refractory material positioned in the rear of the combustion chamber and in front of nozzle.
49989. Imperial Chemical Industries Limited. Cutting artificial filaments into short lengths. (August 20, 1952.) (Addition to No. 45409). Addition to Patent No. 45,409 wherein a knife blade is periodically sharpened by rubbing against at least one spring loaded abrasive stone attached to the moving support, which presses against the cutting edge while the knife blade passes through space between two projections.
49990. Shri Dhar. Method of and means for manufacturing artificial glass gems known as chatons. Embedding chatons in a plastic material so that apex projects which are silvered.
49991. Void.
49992. Ruhr gas Aktiengesellschaft. Method of smelting powdery or finely granulated ores with powdery or finely granulated fuels. Introducing the ores, fuel and fluxes, if any, into the lower zone of a dust generator in dry and degasified condition.
49993. E. V. Twose Limited. Improvements relating to rolling appliances for rolling roads, footpaths, air strips, fields and like ground surfaces. (May 6, 1953.) Comprising a chassis frame having ground rollers, adapted to be propelled along the ground by drive from the motor of a tractor landed upon said frame.
49994. Anglo-Scottish Creameries Limited. Improvements in or relating to foodstuffs. (August 8, 1952.) Oleaginous foodstuffs are prepared by incorporating therein a small quantity of a lactone of an aliphatic hydroxy carboxylic acid having a lactone ring of 4-6 carbon atoms.
- JULY 29.
49995. Universal Oil Products Company. Process and apparatus for separating refined products from industrial fluid mixtures by countercurrent extraction treatment. Establishing an upper layer of lighter fluid and a lower layer of denser fluid in several contacting zones, fluid from one of the layers being passed into an adjacent zone in direct contact with the layer of the other fluid, and fluid from the other layer being passed from the interface through a transfer conduit into the layer of like fluid in the adjacent zone.
49996. Void.
49997. Swastik Rubber Products, Limited. Improvements in or relating to nipples for feeding bottles. An opening is formed at any convenient place in a thickened section of the nipple.
49998. Pulin Bihari Ghosh. A device for mechanically composing in printing systems. Type bodies are kept in compartments one above the other and are pushed out by a bar on the platform.
49999. Void.
50000. Novo-Plast G.m.b.H. Method and apparatus for the production of hollow articles and articles produced thereby. Injecting a thermoplastic material into a first mould to form a thick-walled smaller blank and subjecting said blank to the action of a compressed fluid in a second mould the chamber of which corresponds to the shape of the final article to be produced.
50001. Kollsman Instrument Corporation. Optical instrument for indicating horizontal plane. (December 2, 1952.) Comprising a light source, an aperture, a fluid from whose surface light is reflected, optical black surface backing reflecting fluid surface, lens through which light passes to and from the fluid surface to form an image, the reflecting fluid surface being freely movable and optical sighting system for viewing said image and the object to be viewed.
50002. P. von Arx & Co. A.G. Arrangement for cleaning metal and stone surfaces through impact. Wherein an annular series of hammer-shaped impact tools impinge in succession under an acute angle on the surface to be cleaned.
50003. W. Ritzerfeld and G. Ritzerfeld. Improvements in or relating to a method of duplicating and apparatus therefor. Mirror-script is produced on a prepared transfer-side of a thin printing-block foil which is then duplicated by moistening of the fat-free portions with fat-repellent agents.
- JULY 30.
50004. Void.
- JULY 31.
50005. West Point Manufacturing Company. Improved automatically-threading loom shuttle. The shuttle being

provided with a horn on the threading block to direct the thread into the passages as the shuttle moves across the loom and a plurality of hook members on said horn.

50006. Metropolitan-Vickers Electrical Company Limited. Improvements relating to electron microscopes. (August 1, 1952.) Having means for heating solids on which charged particle beam impinges for the purpose of avoiding contaminating deposits.

50007. Void.

AUGUST 1.

50008. Giuseppe Ricci & Figlio. Improvements in paper bags having a valve opening. Provides a strengthening sleeve at the inlet of the bag.

50009. Societe Anonyme Belge De Mecanique Et D' Armement. Projectile. The inner charge-carrier body rests at its base on a liquefiable and lubricating element.

AUGUST 3.

50010. Capt. A. N. D'Silva. Counter-sinking attachment for drill bit. Comprising a collar with two prongs having cutting edges.

50011. M. A. Tilak. Water cooling arrangement to avoid over-heating of the pressure-stove-tank. Consisting of a ring jointed or the cavity provided on the surface of the stove concentrically around the middle stem of the pressure stove on which the burner is fixed.

50012. Aktiebolaget Radius. Shut-off and control device for incandescent lamps. Characterised in connecting cleaning needle with shut-off valve, between discharge end and nozzle of gasifying tube, closing against fuel pressure when needle lies withdrawn from nozzle.

50013. Regoma Company Ltd. Method of manufacture of a flexible tube of thermoplastic material and machine for carrying out the said method. Characterized in that part of tubular blank adjacent to head is kept at a temperature below the softening point of thermoplastic material.

50014. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of a preparation increasing vitamin a content in animal foods. The process comprises mixing Vitamin A or an ester thereof with a carrier

and with non-aromatic primary amines containing at least eight carbon atoms.

50015. Ciba Limited. Process for the manufacture of compounds of the azulene series. By heating monocyclic ten-ring compounds of the alicyclic series having at most one double bond in the ring, to a high temperature in the presence of catalysts.

50016. Cognate with appln. No. 49755.

AUGUST 4.

50017. Automatic Telephone & Electric Company Limited. Improvements in telephone system. (July 6, 1951.) Divided out of No. 47475, Ante-dated to June 17, 1952. Terminating exchange is provided at the incoming end with equipment to respond to voice frequency signals.

50018. Safca Fillings Ltd. Atomizing apparatus. Container of liquid gas has a valve, the flap of which rests on a seat surrounding an opening in a wall of the container and is integral with a stem fixed at its other end to another wall, one of the walls being distortable.

50019. British Insulated Calender's Cables Limited. Improvements in protective coverings for electric cables, pipes, rods, wire rope and the like. (September 15, 1952.) [Addition to No. 45828.] With a corrosion-protective covering of two parts, one being of unvulcanised rubber compound from which is omitted ingredients for low temperature vulcanisation and the other of a film of moisture-impervious plastic material and containing the omitted ingredients.

50020. Satyanarayan Khaitan. Improvements in or relating to bobbins for machines for spinning, twisting or doubling fibrous materials. Comprising a wooden barrel and separately formed end-pieces, the end-pieces and barrel having complementary screw threads.

50021. G. Alexandre. Filter supply casing. The hollow body is divided into a central chamber and two peripheral chambers, the former one communicating with a first tap nozzle and the second with a recessed portion and a chamber is formed in front of a filter plate, two openings are provided in the partition of the central chamber, and two cocks are mounted in the outer wall of the body.

50022. Prof. Dr. T. Reichstein. A process for isolating a new active substance

from suprarenal glands. Extract obtained from suprarenal glands is separated by distribution between an aqueous solvent and a solvent immiscible with water and/or by chromatography, in conjunction with Girard method for isolating the ketonic portion.

50023. J. M. Huber Corporation. Dye toned printing inks. Comprising carbon block dispersed in a vehicle together with a solution is a solvent of a toning dystuff which is insoluble in said vehicle while the solvent used is soluble in said vehicle.

50024. Radio Corporation of America. Electric control device including one or more semiconductive bodies. Including a semiconducting body, the control voltage in a control circuit being connected to a control electrode on said body for controlling current flow of a source in a utilization circuit which is connected to two equivalent electrodes of the said device.

50025. Hobbs Transmission Limited. Improvements in or relating to variable ratio power transmission apparatus. (August 11, 1952.) Comprising hydraulic pump driven at variable speed, a ratio changing piston in a cylinder with a number of exhaust opening.

50026. Chemie Grunenthal G.m.b.H. A process of preparing new esters of the penicillin series. Treating Pen- COO- R_1 -Z with trimethylamine, Pen being penicillin radical, R_1 an alkylene residue and Z an acid radical.

AUGUST 5.

50027. "Shell" Research Limited. Fuels for internal combustion engines. (November 10, 1952.) Comprising a motor fuel and substituted iron or nickel cyclopentadienyl.

50028. "Shell" Research Limited. Fuels for internal combustion engines. (November 10, 1952.) Comprising a motor fuel, an organometallo compound and an oil-soluble organic compound containing boron or arsenic.

50029. "Shell" Refining and Marketing Company Limited. Lubricants for internal combustion engines. (November 10, 1952.) Comprising lubricating oil and substituted or unsubstituted iron or nickel cyclopentadienyl.

50030. "Shell" Research Limited. Fuels for internal combustion engines. Comprising motor fuel, polyvalent metal

derivatives of cyclopentadienyl and oil-soluble organic compound containing silicon.

50031. J. R. Geigy A.-G. Pharmaceutical composition for the treatment of tuberculous diseases, in particular tuberculosis of the lungs. Mixture of 1 part of pyridine-3-aldehyde-thiosemicarbazone with 3 to 5 parts by weight of isonicotinic acid hydrazide.

50032. Dr. H. Junghans and Gebruder Junghans A.-G. Alarm clock. In combination with clock movement and the alarm mechanism a controlling device for retarding the sequence of hammer strokes at the beginning of the alarm period and a device for damping the hammer strokes.

AUGUST 6.

50033. Siemens & Halske Aktiengesellschaft. Improvements in or relating to teleprinter machines. (July 9, 1953.) Provided with a receiving combiner and guide means for selective adjustment of push members which in turn adjust the combiner.

50034. Stamicarbon N. V. Process for the preparation of phenol and acetophenone or of paracresol and paramethyl acetophenone. Heating in an acid medium 1:1-diphenyl ethane hydroperoxide or 1:1-diparatolyl ethane hydroperoxide.

50035. Stamicarbon N. V. Process of preparing paratoluic acid. Heating dip-tolyl methane hydroperoxide in an acid medium and finally making the resultant p-tolulaldehyde react with oxygen.

50036. Perfogit Societa per Azioni. Process and device for use in the spinning of synthetic linear polymers from the melt. Wherein each bundle of filaments extruded from spinneret passes through a space externally of which a liquid stream flows.

50037. C. Christiansen and G. O. K. Rusch. Improvements in or relating to circular looms for weaving of hoses. Providing a calender the roller or rollers of which is or are positioned in the inner of the weaving ring, pressing the wall of the hose against the bore of the weaving ring.

50038. A. P. Smith, G. Fletcher and Drake and Fletcher Limited. Improvements in and relating to container for insecticide and like spraying equipment. (August 7, 1952.) Container with flexible bag lining having inlet for

admitting air under pressure between casing and lining for compressing liquid.

50039. Polygram Casting Co. Limited. Improvements in or relating to ejector devices for pattern plates. (August 8, 1952.) Wherein ejector elements, flush with working surface are projected out by actuating means to effect ejection.

50040. Polygram Casting Co. Limited. Improvements in methods of and apparatus for making hollow articles from a moulding mixture. (August 8, 1952.) Allowing mixture to fall around heated pattern, agglomerating it into a coating with pressure, curing and removing the same.

50041. TESLA Narodni Podnik. Safety discharge lamp. Fluorescent lamp in which the heated parts of the electrodes, particularly the cathode filament, are surrounded by a cover acting as a protection against explosion.

AUGUST 7.

50042. Mrs. G. E. Mehra. An apparatus for cooling air. Air is conditioned by passing over a spray of water.

AUGUST 8.

50043. Void.

50044. American Cyanamid Company. Process for preparing alkylated methylol melamine condensation products and the products so produced. (June 18, 1953.) Reacting melamine and formaldehyde in a mixture of water and methanol or ethanol, heat reacting the said mixture and neutralising the resultant syrup.

50045. American Cyanamid Company. Improvements relating to the antistatic treatment of materials. Applying to the material a composition comprising a volatile liquid having dispersed therein salts having antistatic properties and one or more agents.

50046. The Distillers Company Limited. Manufacture of substantially pure unsaturated nitriles. (August 13, 1952.) By allowing to react the unsaturated aldehyde and hydrogen cyanide contained as impurities to form a condensation product and the resulting mixture fractionated to recover the nitriles.

AUGUST 10.

50047. Void.

50048. R. P. Aggarwal. A substitute of Agar Agar in bacteriological media.

Treating "Isphagol" botanically known as *Plantago ovata* with alkalies neutralising the alkali and drying to thin chips or powder.

50049. Glaxo Laboratories Limited. A new salt of penicillin G. (August 27, 1952.) N-benzyl- β -phenylethylamine salt of penicillin G is made by reacting penicillin-G with N-benzyl- β -phenylethylamine.

50050. National Research Development Corporation. Improvements in or relating to interval combustion engines. (August 12, 1952.) ABANDONED AFTER PUBLICATION. Means for varying compression ratio and air or air-fuel mixture delivery machine variable to vary amount of air or mixture delivered to engine.

50051. Standard Telephone and Cables Limited. Improvements in or relating to the formation of sinterable ceramic and the like mouldings. (August 11, 1952.) Mixture comprising a sinterable material a thermosetting moulding vehicle and a plasticiser.

50052. Eonit Engineering Company, Limited. Improvements in feed hoppers. (August 14, 1952.) Comprising a bottom inclined at 7° towards a delivery outlet, a canvas supported on said bottom and means for supplying air to the confined space between the bottom and the canvas.

50053. Eonit Engineering Company, Limited. Improvements in silo and batching plant for cement and other materials. (August 14, 1952.) Comprising an elevator for feeding cement or other material, a receiving hopper to receive the material from the elevator and an air chute adapted to divert material from hopper to the outside of the silo.

50054. Maschinenfabrik Augsburg-Nürnberg A. G. Improvements in and relating to devices for adjusting the moving blades of centrifugal pumps and the like. Outer actuating members transmitting adjusting force or torque to inner actuating members remain at rest during adjustment relative to direction of action of the force or torque.

50055. Tweedales and Smalley (1920) Limited. Improvements in or relating to textile spinning and like machines. Providing control members one above and the other below the maximum apparent balloon diameter.

50056. H. Bruckbauer, G. Gotz and E. Bencetti. Spraying device for conditioning or disinfecting air. Container is provided with electric immersion heater and fitting like a lamp base adapted to be connected to socket or holder of an electric circuit.

50057. Void.

AUGUST 11.

50058. British Insulated Callender's Cables Limited. Improvements in presses for the extrusion of metal. (September 23, 1952.) Metal extrusion press having inner and outer extrusion dies mounted in alignment in a housing having one or more passages for the lateral entry of the metal passing from the container to the dies, the housing being a separate member associated with the press body.

50059. Lawler, Ayers & Company Limited. Hydraulic thruster for pipe bending machine. (August 11, 1952.) Power cylinder adjacent piston face of smaller area connected through spring loaded valve, and other end of cylinder through the same valve and manually operable valve to pump cylinder.

50060. American Cyanamid Company. Improvements relating to compositions for addition to animal feeds. The composition comprises one or more vitamins or growth factors and citrus meal as a carrier therefor.

50061. T. Hindmarch. Improvements in or relating to power transmission mechanisms. (August 21, 1952.) An inter engaging input pinion on each of the two or more intermediate shafts and a common output toothed wheel.

50062. Air Products Incorporated. Improvements in or relating to the pumping of liquefied gases and to apparatus therefor. [Addition to No. 34773.] One cold stream cools liquid gas before pumping and second relatively cold fluid stream cools liquid conveying portion of the pump.

50063. The Hadley Company Limited. Improvements relating to spectacles. (August 18, 1952.) Spectacle consists of two components readily detachable from each other, one component consisting of a mounting for the lenses and the other component including a bridge and temple pieces made of a material which will withstand sterilisation.

50064. F Hoffmann-La Roche & Co. Aktiengesellschaft. Malonic acid derivatives and process for the manufacture thereof. [Addition to No. 49298.] Coumarin derivatives are produced by condensing an alkali derivative of dialkyl (1'-p-chlorophenyl-alkyl) malonate with acetyl salicylic acid halide, and heating the product with a cyclising and hydrolysing agent.

50065. Void.

50066. T. J. Smith and Nephew Limited. A burn and wound dressing. Combination of a rolled medicated textile strip is disposed within a tubular core and an elastic textile and non-absorbent wadding "strips are provided".

AUGUST 12.

50067. Council of Scientific and Industrial Research. Synthetic tanning materials (syntans) for making leather. Condensing formaldehyde with a mixture of calophony and phenols or cresols and sulphonating the condensed product.

50068. Electraulic Presses Limited. Improvements in and relating to hydraulic variable pressure relief valves. (August 22, 1952.) Blow off pressure variable by changing position of ports formed in a member independently movable relative to spring loaded valve member.

50069. St. Anne's Board Mill Company Limited. Improved method and apparatus for dewatering pulp or stock on fourdrinier type paper or boardmaking machine. (August 22, 1952.) Applying downward pressure onto watery pulp between an upper moving permeable pressing member and a supported part of the carrier band.

50070. Imperial Chemical Industries Limited. Improvements in or relating to the production of explosives. (September 19, 1952.) Liquid is forced under pressure less than 20 times its original pressure through tubes of pressure resisting material.

50071. Union Carbide and Carbon Corporation. Improvements in or relating to herbicides. (October 15, 1952.) Containing carrier, ester or ester salt of 2-(2, 4-dichlorophenoxy) ethanol and an organic acid with upto 10 carbon atoms.

50072. Wingfoot Corporation. Improvements in de-icers. The heating unit includes a conductive rubber heating

element and wire-containing heating element.

50073. Wingfoot Corporation. Improvements in method of making closed cell cellular compositions. Imparting to a curable material limited ability to expand by blowing a blowing agent.

AUGUST 13.

50074. Void.

50075. The Grant Valve Company (Proprietary) Limited. Improvements relating to plug cocks. The plug comprising a resiliently flexible peripheral segment which when the plug is in closed position, registers with an area of the inner wall of the body surrounding the outlet port, such segment, when the plug is in closed position, being pressed against the inner wall by fluid pressure for the purpose of sealing.

AUGUST 14.

50076. Void.

50077. Olympia Werke Aktiengesellschaft. Improvements in and relating to the construction of typewriters. (June 24, 1953.) Key-lever, mechanism, the intermediate lever bearing and the keyboard form a built-in-unit connected with the lateral end plates of the machine forming machine support and carrier of frictional members.

50078. Dunlop Rubber Company Limited. Improvements in electrical de-icers. (August 23, 1952.) An electrical heating element sandwiched between layers of inorganic heat resistant insulating material.

50079. Merk & Co., Inc. Coated cereal products and process for preparing the same. A water insoluble coating agent is applied to the granules and a whitening agent such as tricalcium phosphate is dusted and the process is repeated to obtain white granules.

50080. R. Bhangay. Steel tyres for tractors and the like vehicles. A steel tyre made of two or more embossed curved plates, plates carrying radial flanges on either side projecting towards the hub of the wheel.

50081. Dot Pens Limited. Improvements in and relating to writing instruments of the ball tip type. Characterized in having a piston made of wax, which floats on the ink.

50082. Pertrix-Union G.m.b.H. Plate cells for galvanic dry batteries. Artificial resin boxes with shell and cover are used for insulation as well as stacking of batteries.

50083. Destrol Manufacturing Company Limited. Sanitary closets. Controlled suction pump draws filtered liquid from the settling tank and discharges into the flushing cistern.

AUGUST 17.

50084. Capt. A. N. D'Silva. Improved adjustable spanner. Spanner having wedge-shaped clearances between the body of the lower jaw and shank of the upper jaw, steel balls being packed in this compartments together with the spiral spring.

50085. Void.

50086. The Mining Engineering Company Limited. Roof supports for mines. (September 5, 1952.) Manually operated valve is provided between the hydraulic accumulator and the hydraulic cylinder with ram.

50087. N. V. De Bataafsche Petroleum Maatschappij. Process for preparing 2-alkyl-3, 4, 5, 6-tetrahydropyrimidine nitrates and fungicidal preparations containing them. Neutralising 2-alkyl-3, 4, 5, 6-tetrahydropyrimidine with nitric acid wherein 2-alkyl group is saturated group containing 11 to 21 carbon atoms.

50088. Armstrong Cork Company. Improvements in or relating to textile fiber working units. Comprising polyvinyl chloride resin or the resinous polymerization product of a mixture of vinyl chloride and vinyl acetate together with a plasticizer.

50089. American Home Products Corporation. Improvements in or relating to therapeutic compositions. Combining with a carrier, communitied crystals of N,N'-dibenzylethylenediamine dipenicillin G, the said crystals being crystallized from a formamide solvent medium.

50090. Unilever Limited. Improvements in or relating to food products. Comprises a cohesive non-homogenous mass of chewy protein gel in the form of discrete particles.

50091. Unilever Limited. Improvements in or relating to detergent compositions. Consists of soap or anionic soapless detergent or non-ionic soapless detergent

or mixtures thereof, and a thiuram sulphide.

50092. The British Thomson-Houston Company Limited. Improvements in and relating to electromagnetic circuit breakers. (August 18, 1952.) Movable switcharm comprising two pivotally connected members, one to be held by an electro-magnet when energised, the other carrying movable contact on one side of connecting pivotal point and being attached on the other side of the pivotal point to a retarding device to impart retarding action to the contact carrying member during closing operation.
50093. National Research Development Corporation. Apparatus for the administration of analgesics and anaesthetics. (April 4, 1952.) [Addition to No. 48400.] Divided out of No. 48400, antedated to November 7, 1952. Comprising a gas capacity which forms part of or communicates with the section of conduit that is downstream of analgesic-conveying duct outlet.
50094. Dr. C. Otto & Comp., G.m.b.H. Improvements in or relating to the treatment of blast furnace gas and the constituent matters contained as produced on smelting ores in a low-shaft furnace. Passing the heated gas at a temperature of 700°C through a hot filter having a solid filling.
50095. Engineering Components Limited. Improvements in or relating to gaskets and like sealing. Gasket formed of a metal or alloy within half hardness range; cross section of corrugation surrounding aperture is arcuate and one-third circumference of circle; its height is not less and not more than twice thickness of gasket.
50096. Ciba Limited. Process for the manufacture of new cyclo-alkano-hydro-naphthalene compounds. (September 5, 1952.) By reacting a 3-ethenyl-cyclohex-2-en-one unsubstituted in the 4-position or a functional keto derivative thereof with an alicyclic ketone.
50097. C. T. Patira. Improvements in or relating to purses, pouches and the like. Purse provided with a closing flap having a tucking in flap and lugs.
50098. The English Electric Company Limited. Improvements relating to control systems for electrically driven mine winders, hoists and the like. (August 27, 1952.) Comprises a speed regulator, means for producing electrical speed reference quantity varying with speed of winder, hydraulic actuator for the regulator.
50099. Stamicarbon N. V. Process of recovering lactams. Prior to being extracted, the lactam oil is concentrated until its lactam content amounts to 80 to 90 per cent. by weight.
50100. Parke, Davis and Company. Process for the production of 1-p-Nitrophenyl-2-Dichloroacetamidopropane-1, 3-diols. Reacting a dichloroacetimino alkyl ether with 1-p-nitrophenyl-2-amino-propane-1, 3-diol in an organic solvent containing at least one equivalent of water.
50101. Chas. Pfizer & Co., Inc. Improvements in or relating to therapeutic agents and preparation thereof. (June 24, 1953.) Condensing streptomycin and isonicotinyl hydrazine.
50102. The Firestone Tire and Rubber Company. Improvements in or relating to tire rim and valve stem assembly for tubeless tires. A tire rim and valve stem assembly for tubeless tires, the rim having an out-of-round valve stem hole and the valve stem having a portion adapted to extend into the valve hole, the said portion is of such a complementary out-of-round shape that there is no substantial rotational movement.
50103. Tecalemit Limited. Improvements in or relating to pressure-fluid actuated motors. (June 17, 1953.) Two pistons reciprocating in cylinders arranged on non-parallel axes, single distributing slide valve driven by each piston to cause reversal of the other piston, lost motion connection between main piston and valve.
50104. Void.
50105. Standard Telephones and Cables Limited. Improvements in or relating to electric trigger circuits. (December 23, 1952.) Including an amplifier arranged to be capable of assuming two different current conditions, means for generating an alternating current, triggering means and means for utilising the alternating current for holding the amplifier in one condition.
50106. Standard Telephones and Cables Limited. Improvements in or relating to electric frequency dividers. (December 23, 1952.) Including an amplifier which is blocked in the absence of the input wave, a gating circuit associated

AUGUST 18.

with the amplifier said circuit being controlled by the input and output waves.

50107. Standard Telephones and Cables Limited. Improvements in or relating to trigger circuits. (February 17, 1953.) Comprising a second harmonic transformer arrangement capable of change-over from one output condition to a second output condition in response to the arrival at an input of an electrical pulse.

50108. Demmer-Werke, Adalbert Demmer. Improvements in or relating to therapeutically useful appliances. Sanitary towels, tampones, bandages and the like containing chlorophyll.

AUGUST 19.

50109. Void.

50110. Void.

50111. M. M. Parikh. A shooting toy vehicle. The driving mechanism comprises a compression spring in an encasement in the chassis, compressor rod and lever arrangement to lock or unlock the compressor in its notches.

50112. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to derivatives of phenthiazine. (June 22, 1953.) N'-Substituted-10-amino-alkyl phenthiazines the alkyl group representing an aliphatic chain containing 2 or 3 carbon atoms are prepared from the corresponding phenthiazine, aminoalkylphenthiazine, halogenophenthiazine or phenthiazine aldehyde used as starting materials.

50113. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to phenthiazine derivatives. (June 22, 1953.) 10-alkylene-carbonamido alkyl phenthiazine derivatives are prepared by treating the corresponding alkyl ester, acid chloride or anhydride with primary or secondary amine or by reacting a phenthiazine with an N-alkyl substituted haloalkylene carbonamide.

50114. Merck & Co., Inc. Process for preparing 3, 3-diaryl-5-substituted-2-pentanones and the compounds thus produced. By cyanoethylating with acrylonitrile, a ketone of the general formula $\text{CH}_3\text{C}(=\text{O})-\text{C}(\text{C}_6\text{H}_5)_2-\text{H}$ wherein Y is hydrogen, lower alkyl, lower alkoxy or a halogen radical.

50115. British Insulated Callender's Cables Limited. Improvements in installations of electric capacitors. (September 12, 1952.) A bank of tank-type

capacitors associated with external apparatus for circulating insulating liquid at a rate depending on its temperature.

50116. Babcock & Wilcox Limited. Improvements in or relating to methods of vapour generation, vapour generators adapted to operate according to such methods, and power plants incorporating double-pressure vapour generators. (August 25, 1952.) Varying the pressure of the liquid to be vapourised so that vary the rate of heat transfer to the liquid.

50117. W. B. Smith. Improved process and machine for the treatment of green tea leaf in the manufacture of tea. Subjecting the leaf to a combined cutting, pressing and rubbing action to break or disrupt the sap cells of the leaf.

50118. Siddheshwar Sanyal. A machine for testing gun-powder continuity in safety fuses for blasting. Plunger rod with roller bearing on fuse cord lowered when portion of cord with less than requisite gun powder passes and second spring pressed plunger released to engage cord and mash defective part with colour or ink.

50119. Lane & Wittaker Limited. Improvements in sawing or cutting appliances. (December 20, 1952.) Forwardly projecting power shaft housing tube mounted on a wheeled chassis to be rotatably adjustable about its axis.

50120. Ciba Limited. Process for color developing photographic images. Wherein the photographic layer free from insoluble silver salts, is developed in the presence of a coupling substance and a soluble reducible salt with an aromatic amine.

50121. Western Electric Company, Incorporated. Semi-conductor electric signal translating elements and devices utilizing them. (December 9, 1952.) Comprising semi-conductive body having two zones of different conductivity type forming an emitter junction and means to restrict the active portion of the emitter junction to a small part of the possible junction area between the two zones.

AUGUST 20.

50122. Council of Scientific and Industrial Research. Process for the deodorisation or recovery of volatile principles from odoriferous substances such as food stuffs. The suitably diluted odoriferous substance is atomised by means of high 50-60 lbs.) pressure steam and a jet.

50123. E. Gretener. Apparatus for simultaneous projection of a plurality of images composing a television image. [Addition to No. 45747.] Simultaneous projector for black-and-white and three colour component pictures constituting a television picture having means for reducing the sharpness of the colour component pictures in a direction normal to the scanning lines.

50124. E. Gretener. Apparatus for forming the key in enciphering devices. Key formed depending upon continuously permuted position of stepwise rotatable elements having same circular pitch and on ordered cascade-like group is formed by combining a part at least of said elements, stepwise by rotation of the respective higher elements with said group being effected depending upon the position of all lower elements of the group, respectively.

50125. Imber Research Limited. Improvements in or relating to space heating apparatus. (October 9, 1952.) A coloured panel not normally visible and a reflector incorporated in the apparatus.

50126. Societe La Cellophane (La Cellophane SA). Improvements in or relating to methods and apparatus for producing wrapped bars of chocolate and the like thermoplastic materials. (September 12, 1952.) [Addition to No. 42396.] The smoothing mechanism comprising upper and lower, superposed, endless chains having smoothing plates to engage surfaces of chocolate bars and cross strips to engage the closure strips connecting the bars.

50127. Societe La Cellophane, (La Cellophane SA). Improvements in or relating to methods and apparatus for producing wrapped bars of chocolate and the like thermoplastic materials. (September 12, 1952.) [Addition to No. 42396.] Applying to the severed edges of closure strip, as the bars are advanced, a sealing substance.

50128. Societe La Cellophane, (La Cellophane SA). Improvements in or relating to methods and apparatus for producing wrapped bars of chocolate and the like thermoplastic materials. (September 12, 1952.) [Addition to No. 42396.] The closure strips are severed by a rotary cutter mechanism.

AUGUST 22.

50129. Void.

50130. General Steel Castings Corporation. Railway vehicle central bearing

structure. Central portion with substantially vertical surfaces oppose lateral movement and horizontal bearings extend outwardly from the centre portion.

50131. Vereinigte Aluminium-Werke Aktiengesellschaft. Method of producing high gloss surfaces on aluminium and aluminium-base alloys. The objects after previous degreasing are treated with solutions which contain ions of hydrogen, ammonium, nitrate and fluorine.

AUGUST 24.

50132. Hobbs Transmission Limited. Improvements in or relating to variable ratio power transmission apparatus. (September 9, 1952.) Having gearing associated with a number of friction devices whereby different ratios can be brought into operation by selective engagement of the friction devices.

50133. C. D. Patents Limited. Conversion of carbonaceous matter into useful gas. Fuel inlets and air inlets are so provided in reaction vessel that inwardly directed flat fan shaped or fish tail flames are formed.

50134. Void.

50135. Ashley Accessories Limited. Improvements in or relating to snap-action electric switches. Comprising leaf spring slotted lengthways adjacent both its side edges so that the strip has a central longitudinal limb and two side limbs, outer limbs being corrugated, crimped or buckled and a switch operating member acting on one face of the leaf spring and a biasing or re-set spring acting on the opposite face of the leaf spring.

50136. Prof. Dr. T. Reichstein. Process for the manufacture of new esters of the steroid series. 11-hydroxy steroids are converted into 11-tri-fluoracetates.

50137. Ciba Limited. Manufacture and use of polymerizable compounds. Wherein (a) a condensation product of formaldehyde with a compound of the aminotriazine or urea group (b) a nitrile or amide of an unsaturated polymerisable acid and (c) a compound containing at least one active hydrogen atom, are reacted with one another such that the final product contains one double bond.

50138. Ciba Limited. Process for the manufacture of new acylated products.

Preparing acylated derivatives of organic polyhydroxy and polyhydroxy amino compounds by known methods.

50139. L. Gruber. Screw-on closure for containers. Comprising a screw-on cap having a central opening in its top, a sleeve type inner member made of a compressible material, the edge of the bottle-neck being provided with plurality of radial ribs.

AUGUST 25.

50140. Dunlop Rubber Company Limited. Bonding rubber to metal. [Addition to No. 48479.] Forming on the non-ferrous surface an adherent film of oxide, applying to the surface a heat vulcanisable rubber with a layer of organic polyisocyanate interposed between the adherent film and the rubber.

50141. The English Electric Company Limited. Improvements in and relating to electric isolator switches. (September 3, 1952.) Provided with pairs of blade contacts and corresponding pairs of bridging contacts carried by a movable member between closed and open portions, the bridging contacts being carried such that they are free to slide against a spring in transverse direction of movement of the movable member but normally biased by the spring to a fixed initial position relative to the movable member.

50142. Estirajes Balmes, S. A. Improvements in drawing mechanisms for textile machines. Condenser comprises a mechanisms consisting of a rigid frame inside which there is a roller bearing against the lower rollers of the two consecutive pairs of rollers.

50143. Void.

50144. Wingfoot Corporation. Inertia valve for anti-skid control. Includes stationary and rotary valve members the latter member including a part for attachment to the wheel and second part resiliently connected to the first part.

50145. W. Heberer. Positive and negative electrode structures preferably for lead accumulators and process for the production thereof. Active particles like lead dust and connected by plastic binder and made to remain in a porous state

50146. M. Rommel. Method for packing articles, such as razor blades. Placing the article between two strips of paper

covered with an adhesive extending at all sides and stuck together.

50147. British Telecommunications Research Limited. Improvements in or relating to feedback amplifiers. (August 27, 1952.) Of the negative feed-back type including two feed back loops in which the final stage or stages are included in both feed-back loop.

50148. British Fibrak Separator Company Limited. Improvements in or relating to the manufacture of separators for electric accumulator plates. (August 27, 1952.) Progressively deforming the ribbon material about parallel fins from the middle and maintaining the deformation.

50149. British Fibrak Separator Company Limited. Improvements in or relating to the manufacture of separators for electric accumulator plates. (October 10, 1952.) Progressively deforming the ribbon material about parallel ribs from the middle outwardly towards each edge of ribbon maintaining the deformation and applying heat and pressure.

50150. Borax Consolidated Limited. New crystalline sodium borate. (August 27, 1952.) Heating together sodium borate or a mixture of sodium borates having molar ratio $\text{Na}_2\text{O}:\text{B}_2\text{O}_3$ between 0.4 and 0.7 and water to a temperature depending on molar ratio.

50151. Cognate with application No. 49755.

50152. Wilhelm Sihn Jr. K. G. Improvements in or relating to antennae. Used on motor vehicles in which there is combined with the telescopic tubes and the rod of the antenna a conveying rod of elastically yielding plastic material fastened at one end to the antenna rod and a rotatable actuating member provided with undulating portions for the conveying rod.

50153. Void.

AUGUST 26

50154. Chemie Grunenthal GmbH. Process for the production of penicillin compounds. A penicillin or a metal salt of penicillin is reacted with a benzimidazole compound.

50155. Merck & Co., Inc. Improvements in the filling of solid substances into containers by suspending the solid in a volatile liquid of substantially equal density. Suspending the substance in a

volatile liquid which is inert to the substance and is of a density approximately that of the substance, measuring into a container a desired amount of the substance and removing the liquid as a vapour.

50156. A Schatzschock and A. Weitzl. Filing tools, method for the production of such tools and cutting devices for carrying out said method. Flat or curved metal plates having numerous small portions bent out of the surface and are in the form of strips, are connected to the plate by their extremities and are bent out of the surface of the plate and form cutting edges with two longitudinal edges one above and one below the plate.

50157. Inventio Aktiengesellschaft. Braking arrangement for lifts. Braking motor connected to supply system during braking period and the direct current is controlled through a rectifier valve.

50158. Wingfoot Corporation. Improvements in or relating to tubeless tires. Forming between separable portions of the rim and in the path of possible leakage between portions, a circumferential cavity below the bead seat and disposing in such cavity a sealing ring.

50159. W. F. De Penning. Machine for and a method of knitting hosiery and other fabrics. Knitting includes the feeding of at least three yarns to be knitted by different groups of needles during a reciprocatory stroke, the needles being so selected and the yarn so fed that each needle group knits only one of the yarns.

50160. N. H. Shah. Improvements in or relating to dyeing. While dyeing with vat colours along with dyestuff and chemicals, kier waste material is added as a levelling material.

AUGUST 27.

50161. F. Bock. Process for producing pre-stressed reinforcer concrete structural components. Parallel reinforcing bars formed into closed loops, curved parts at both ends supported by shaped spacing pieces positioned against recessed anchor plates; spacing pieces driven in after hardening of concrete to tension reinforcement and effect pre-stressing.

50162. K. Abildgaard-Elling. Method for the production of 21-esters of 21-hydroxypregnane and -pregnene compounds.

(February 28, 1952.) By reacting the corresponding 21-iodo compounds with an alkali metal or silver salt of the acid with which esterification is desired.

50163. Thomas C. Keay Limited, and R. N. Walls. Threading device for loom shuttles. (August 29, 1952.) Consisting of a structure having an open-ended waft-receiving channel running from one to the other and disposed adjacent to one side of the structure, a waft-receiving eye, a tangential channel extending from the eye.

50164. Standard Telephones and Cables Limited. Improvements in or relating to electrical capacitors. (March 12, 1953.) [Addition to No. 46588]. Impregnating with thermosetting mixture of resin and hardener, and encasing and sealing the impregnated capacitor unit by means of the thermosetting mixture within metal container.

AUGUST 28.

50165. Surja Nath Chatterjee: Improvements in and relating to soling material for footwear. Comprising a layer of rope partially embeded over one surface in a layer of elastomer.

50166. C. T. Patira. Diary-cum-wallet. Comprises two side covers to hold a diary and a flap to fold over and overlap one of the side covers to close the mouth, and flaps at the inside of the two side covers, so that the outer covers of the diary may be slipped below the flaps.

50167. C. T. Patira. Improvements in or relating to purses, pouches, bags and the like. A base provided with multiple partially covering flaps on the top, so that a part of each flap is overlapped by a part of the adjoining flap.

AUGUST 29.

50168. A. F. Lala. Improvements in or relating to cash counter. Comprises a desk, a transparent partition and a rotatable disc fitted on the desk below the partition.

50169. Compagnie Internationale De Biochimi. Improvements in and relating to growth factors. Cultivating a mushroom in a culture medium containing carbohydrates, a nitrogen source, a magnesium salt, a phosphorus compound and aligoe'ements.

50170. Imperial Chemical Industries Limited. Preservation of rubber.

(September 22, 1952). Void after publication. Treating unvulcanised rubber latex with dihydroxy diaryl sulphide.

50171. Dunlop Rubber Company Limited. Improvements in or relating to pneumatic tyres. Comprising a pair of beads, a ply of mutually parallel coated metal cords and at least two plies located in the crown, the cords therein being parallel to two opposed directions each inclined at an angle 0° — 30° to a plane normal to the rotational axis of the tyre.

50172. M. V. Naidu. Improvements in or relating to segmental roller bearing for cycles, rickshaws, bullock-carts, hand-carts and the like. Consisting of a fixed semi-circular plate the chain consisting of cylinders which run around the said semi-circular plate and which are in contact with a bush through which the axle of the vehicle passes.

50173. Council of Scientific and Industrial Research. A process for the utilisation of coal in cement manufacture. By feeding a ground mixture of limestone and coal to the kiln and firing with more ground coal.

SEPTEMBER 1.

50174. Void.

50175. Monsanto Chemicals Limited. Improvements relating to germicides. (September 3, 1952.) Comprises an aqueous solution of one or more germicidal phenols and an anionic or non-ionic dispersing agent in acidic conditions.

50176. Dunlop Rubber Company Limited. Improvements in disc brakes. (September 4, 1952). The outer periphery of the annular disc is connected to the wheel for rotation and friction plates with pads are located adjacent liner periphery of the disc.

50177. Hemphill Company. Improvements in or relating to hosiery. (March 5, 1953.) Two yarns knit in a mesh structure, a second portion comprising said two yarns in plaited relationship, and a third portion comprising said same yarns knit in reverse plaited relationship.

50178. Ciba Limited. Process for the manufacture of oxidation products of the steroid series. Androstane or pregnane compounds containing in the 3-, 17- or 20- position a free or protected -OH. group of oxo group are subjected

to the action of the culture of an escomycetes of fungus imperfectus.

50179. T.M.M. (Research) Limited. Improvements in textile spinning doubling and twisting machines. (September 5, 1952.) Creel or container of material is located at a lower level than the spinning elements, the drawing device situated at an intermediate position, and the spinning device at the uppermost level.

SEPTEMBER 2.

50180. Anil Chandra Biswas. Improvements in or relating to faucets. Comprising U-shaped pipe connected to liquid inlet and discharge through passage reversing drum, float ball within said pipe auxiliary duct connecting its arms and means to retard the ball's passage at bend.

50181. Ramapati Ghosh. Group or gang operated universal tilting insulator switch. Comprising one or more fixed insulators and one or more tiltable insulators having contact blades adapted to be held by contact clips mounted on fixed insulators.

50182. H. J. Longley. Improvements in or relating to hand lifting trucks, trolleys, barrows or the like. An additional shaft with a handle is mounted upon the shaft of the trolley at a point near the handle of latter shaft, so that it can rotate in a vertical plane about said point.

50183. American Cyanamid Company. Improvements in or relating to copolymerizable compositions. (July 16, 1953.) A mixture of a polyglycidal ester of a poly-carboxylic acid, an alpha, beta unsaturated acid and a styrene.

50184. Monsanto Chemical Company. Terpolymers. Terpolymers of styrene, acrylic acid and acrylonitrile.

50185. Monsanto Chemical Company. Polystyrene molding powders. Comprising a mixture of homopolymer of styrene and a copolymer of butadiene and styrene.

50186. Void.

50187. K. O. P. Fischer. Method of producing smelting coke from peat. Peat and finely divided carbon containing additives are intimately mixed and coked at elevated temperature.

50188. Fonderies Deberny & Peignot. Improvements to the constitution of

printing type for arabic characters. Wherein the characters have on each side, right and left respectively, a flat portion, the bringing together of these flat portions ensuring the joining of the characters.

50189. G. Ingram. Process for applying pictorial and other matter to rubber and like surfaces treated thereby. (February 12, 1953.) Void after publication. First producing the rubber article in a semi-cured state then taking a print of the pictorial on a paper coating the printed surface with a solution of rubber and then processed subsequently.

50190. SONOPTIC. Improvements in cinematographic film projection methods giving the impression of three dimension sighting. (July 29, 1953.) Void after publication. Comprising shooting lens covering a field range that is a multiple of the field range used conventionally and in front of or behind which is arranged a screen having the sizes of the panoramic screen, whereas the focal length of the lense used in the projector is equal to the focal length used in conventional projector lenses divided by the multiple of the shooting field range.

50191. Cognate with application No. 49755.

50192. Shivaji Works Ltd. Improvements in or relating to agricultural implements for unearthing ground nuts and for like purposes. A wheeled structure has on its front side a yoke and on its rear side a slicing blade.

50193. Koppers Company, Inc. Gasification of fuels. A hot mixture of gaseous product from a gasifier is impinged on a bed of moving solid fuel.

SEPTEMBER 3.

50194. J. L. Mulvaney. Sun blinkers and closures for window, door and the like openings and their operating means and/or controlling gadget. Provided with rotating or sliding means to shield an opening from any direction or close the openings.

50195. The General Electric Company Limited. Improvements in or relating to apparatus for detecting the presence or absence of a conducting of magnetic object. (April 10, 1953.) [Addition to No. 48196.] Providing an electric transformer having a winding arranged to

be energised with alternating current and two windings mounted on the same core such that electromotive forces in the windings become unbalanced to provide a differential signal.

50196. Wingfoot Corporation. Improvements in tires. A liner adhered to the inner surface of a pneumatic tire which is made up of (A) at least one rubbery material and (B) a rubber like co-polymer.

50197. W. Myhre. Improvements in load wagons provided with a tippable load platform. Arranging the longitudinal supporting beams of the load platform and the longitudinal frame beams of the wagon in such a way that they are situated side by side in the horizontal plane and overlapping each other in vertical plane.

SEPTEMBER 4.

50198. Void.

50199. Void.

50200. Slasto Company of Africa (pty.) Ltd. Process for the treatment of liquid containing objects of vegetable origin to separate constituent parts thereof. Subjecting the objects to a reduced temperature to solidify their outer fluid constituents and then heating by electric or electro-magnetic field.

50201. The British Thomson-Houston Company Limited. Protective coatings on molybdenum and tungsten for glass sealing. (September 8, 1952.) Applying to the surface of the article a coating of metal the coating being applied by a physical or electrical method.

SEPTEMBER 5.

50202. A. Hindle. Improvements in and relating to the manufacture of cuprous compounds, particularly cuprous chloride and cuprous oxide. Reacting together acid sodium sulphate, sodium chloride and copper either yielding oxygen or with oxidising agent.

50203. A Hindle. Improvements in and relating to the manufacture of basic copper chloride. Reacting a mixed mass of sodium and copper sulphates with acid sodium sulphate and copper or copper oxide with reagent to bring chlorine.

SEPTEMBER 7.

50204. Imperial Chemical Industries Limited. Improvements in or relating

- to a process and device for converting a continuous tow of artificial filaments into a silver comprising staple lengths. (October 20, 1952.) Repeating the cycle of operations of combining from the free end in steps of progressively greater length, cutting the combed length to desired length and forwardly metering as measured from the cut end a sufficient length of tow or band and cutting into staple length.
50205. British Celanese Limited. Improvements in textile materials. (September 22, 1952.) Fugitive tinting composition comprises a direct cotton dye in association with a water soluble addition polymer of an N-vinyl lactam.
50206. The English Electric Company Limited. Improvements in and relating to francis turbine runners. (September 19, 1952.) Runner skirt ring fabricated by welding two portions, lower one consisting of or having a surface more resistant to cavitation than the upper one.
50207. Colgate-Palmolive Company. Shampoo compositions. The composition consists of water soluble organic synthetic detergent and a minor proportion of hair-substantive organic fluorescent compound in an aqueous medium.
50208. Malew Engineering Limited. Improvements in or relating to dies. (September 29, 1952.) Comprises in combination a male die part and a female die part, die part are physically unconnected base portions of thickness as to combine to form the required complementary male and female shapes.
50209. Walton Washing Machine Corporation. Improvements in machines for washing clothes. (March 6, 1953.) A hollow perforated clothes engaging member, having external gripping surfaces reciprocates vertically in a container holding liquid and articles.
50210. C. T. Patira. Improvements in or relating to purses. Purse comprises two constituent parts connected to each other by straps enabling the parts to be folded on each other.
50211. Void.
50212. Henkel & Cie G.m.b.H. Process for the preparation of sulphonated polyethers. Contacting 3 molecules of sulphonic agents with at least one molecule of polyethers containing at least 3 ether oxygen atoms.
50213. Henkel & Cie G.m.b.H. Process for sulphonating alcohols. Contacting alcohol with addition product formed from chlorosulphonic acid and polyether have 3 ether oxygen atoms.
50214. Void.
50215. Novo Terapeutisk Laboratorium A/S. Process of increasing the physical stability of aqueous suspensions of penicillin compounds. Removing atmospheric oxygen from the containers in which suspensions are stored.
50216. Cognate with appln. No. 49755.

SEPTEMBER 8.

50217. Fibreglass Limited. Improvements in or relating to insulating material. (October 7, 1952.) Insulating material of glass fibres or mineral wool is impregnated with a water-soluble silicate of low alkalinity.

50218. Rudman. Darlington & Co. Limited. Friction drives. A yieldable coupling between resilient friction material and rotor body reduces or obvious transmission of sudden jerks to rotor.

50219. G. R. Costley. Improvements relating to percutaneous therapeutic preparations. (September 18, 1952.) The therapeutic substance is intimately associated with a vitamin of the B class or a functional derivative thereof mixed with one or more sugars.

50220. Void.

50221. The British Thomson-Houston Company Limited. Improvements in and relating to magnetic materials. (September 15, 1952.) Electrolytically depositing iron on a substrate material using ferrous chloride as an electrolyte.

SEPTEMBER 9.

50222. Marconi's Wireless Telegraph Company Limited. Improvements in or relating to radio direction finders. (September 12, 1952.) Comprising direction determining aerial of a plane polarisation, an auxiliary aerial to receive waves polarised at right angles to said plane and means actuated by signals exceeding predetermined strength received on the auxiliary aerial, for rendering the direction finder inoperative.

50223. Portable Balers Limited. Improvements in or relating to baling machines. (September 16, 1952.)

Comprising a body having a press head and a mobile truck adapted to support material to be baled within the machine during a pressing operation.

50224. Stamicarbon N. V. Process for the preparation of oximes by reduction of nitrocompounds of aliphatic or cycloaliphatic hydrocarbons. Passing nitrohydrocarbon in the vapour phase mixed with hydrogen over a catalyst at a temperature within the range of 90—300°C.

50225. D. Napier & Son Limited. Apparatus for sensing changes in the specific gravity of a liquid. (September 11, 1952.) Comprises a rotary impeller for producing a pressure differential proportional to the square of the speed of rotation, means for converting this differential into a force, a rotary device and a balancing device.

50226. D. Napier and Son Limited. Hollow blades for turbo machines. (September 12, 1952.) Blade is formed of a sheet metal manipulated in a hollow aerofoil section and having a root portion made in two parts.

50227. Cassella Farbwerke Mainkur Aktiengesellschaft. Process for the manufacture of new dihydrazino compounds. O-dinitriles in which the nitrile groups are linked to a heterocyclic ring are treated with 3 moles of hydrazine.

SEPTEMBER 10.

50228. Dr. R. S. Dubey and H. Singh. A process for the purification of molasses. Aqueous solution of molasses is clarified by precipitating the impurities therein by liming without substantial destruction of reducing sugars.

50229. Void.

50230. Void.

50231. Ingold & Co. Variable V-belt transmissions. Two opposite conical half-pulleys coupled for rotation with and slidably telescoped into one another with cylindrical tubular hub portions.

50232. N. V. Philips' Gloeilampenfabriken. Improvements in or relating to a method of impregnating fibre masses with a viscous, hardenable resin insoluble in water. Use is made of an impregnation liquid constituted by an unstable emulsion of a pre-condensate in water and moving the liquid.

SEPTEMBER 11.

50233. Societe D'Electro-Chimie, D'Electro-Metallurgie Et Des Acieries Electriques D'Ugine. Process for reducing low grade ores. (June 19, 1953.) Effecting contact between melted ore and molten metallic reducing bath, the mass of reducing bath being much greater than theoretically necessary.

50234. Standard Telephones and Cables Limited. Improvements in or relating to the storage of intelligence. (September 19, 1952.) Comprises a number of user circuits and a plurality of intelligence storage devices.

50235. KO-WE Niederschachtofen Gesellschaft. Combined stack furnace and firebox. Stack furnace and firebox combination wherein the firing arrangement for the firebox serves simultaneously as the heating means for a metal producing stack furnace.

SEPTEMBER, 12.

50236. Void.

50237. Void.

50238. Void.

50239. Void.

50240. Industrial Service & Engineers Ltd. Improvements in or relating to ploughs. Comprising share with soil plate, frog on which soilplate, share and bracket are mounted, the bracket carrying poleboard in the form of a plate with adjustment hole for the handle and pole respectively and the pole being held by a pin in fixed predetermined position in the bracket.

50241. Dipl. Ing. A. Kreidler. Method of and means for manufacturing gear wheels. Wherein a length of steel is produced by a forging operation, from which gear wheels are separated as discs.

50242. Harry Ferguson Research Limited. Improvements in or relating to vehicle axle and suspension assemblies. (September 13, 1952.) Vehicle axle suspension comprises upper and lower links having pivotal connections at the inner ends to the chassis and the bearings, spacing between inner pivots being less than the spacing between outer pivots.

SEPTEMBER 14.

50243. Void.

50244. Courtaulds Limited. Process for the recovery of dimethyl nitrosamine

- from its aqueous solutions. Extracting with halogenated aliphatic hydrocarbon.
50245. C. H. Booth and H. B. Hardwick. Improvements in bourdon tubes and like resilient, pressure responsive tubular elements. Comprising a tubular element composed of two flexible strips secured to each other, a pressure tight closure at one end of the tube and a source of pressure at the other end.
50246. Société Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to the production of 10-amino-alkyl phenothiazines. Comprises reducing N-carbonamide-phenothiazines with lithium-aluminium hydride.
50247. C. Cinquini. A new or improved auscultation and percussion sounding instrument. With a body having acoustic chamber closed at the front by a diaphragm and communicating with a rigid tube projecting from the periphery of the body to form a handle and forked for attachment to binaural tubes at its free end and a covering of yielding material e.g. rubber on the body.
50248. K. Hjellnes. Blank-cracker. Charge enclosed in weak enclosure is surrounded by air space confined within stronger enclosure made of two concentric tubes.
50249. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of substituted tropic acid N-(γ -picolyl)-amides. Reacting tropic acid chloride, which may be acetylated with methyl-, ethyl- or allyl-(γ -picolyl)-amine.
50250. W. Ritzerfeld and G. Ritzerfeld. Improvements in or relating to rotary duplicating machines. Comprises side walls carrying a printing drum and a counter-pressure roller cooperating with the drum.
50251. Ciba Limited. Process for the manufacture of new poly-halogenpyridazines. A β -dicarbonyl compound which is unsaturated in the $\alpha:\beta$ positions is reacted directly or in stages with hydrazine.
50252. Void.
50253. H. J. Longley. Storage or filing case or cabinet suitable for gramophone record discs. Having a series of horizontal compartments which are open at the front and provided at the rear with an ejector device.
50254. The Dorr Company. Improvements in clarifying tanks having flocculating devices. (September 24, 1952.) Consists of a central pier, a flocculation compartment separated from a surrounding sedimentation compartment, the flocculation compartment is formed as a shallow depression.
50255. Ciba Limited. Process for the manufacture of new thiono-pyridazines. Replacing oxo-group in 1-alkyl-6-oxo-1:6-dihydropyridazone by sulphur.
50256. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of novel methyl pyridine compounds. Reacting the compound $R'-NH-NH_2$ with a compound of the formulae $R''-Hal$ or $R''-O-R''$ where R' stands for 2-methyl-pyridine-4-carboxylic acid radical and R'' stands for an aliphatic, alicyclic aromatic or heterocyclic carboxylic acid radical.
50257. Western Electric Company Incorporated. Improvements in or relating to stylus-heating arrangements for phonograph recorders. (March, 20, 1953.) Heating coil mounted on the stylus, formed in a current conducting wire extending between the source of heating current, the end portions of the current conducting wires are so disposed and are of such stiffness as to maintain the coil in contact with the stylus and to reduce the compliance of the coil and stylus.
50258. H. J. Elliott. Improvements in or relating to method of and apparatus for extraction of sulphur from sulphur ore. [Addition to No. 47257]. Heating the ore with a concentrated solution of calcium chloride or magnesium chloride between 118° and $150^\circ C$ and filtering the molten sulphur at $128^\circ C$ to $138^\circ C$ by suction or by application of pressure.
50259. Void.
50260. The British Thomson-Houston Company Limited. Improvements in and relating to electric current control circuits. (September 22, 1952.) For maintaining the D.C. current in a bus-bar at a predetermined value, using the field associated with the D.C. current in the bus-bar to influence the performance of an inductor, such that the A.C. current in the inductor varies proportionally to the D.C. current in the

SEPTEMBER, 15.

bus-bar and responds to changes in the D.C. current.

50261. J. Peterhans. A method of and apparatus for making slide fasteners. Partial lengths cut off from a wire or ribbon are formed into U-loops the legs of which are of less width than the yoke, the legs are drawn inwards, a cord is laid in each drawn in portion and the ends of the legs are bent around the cords, gripping them.

SEPTEMBER 16.

50262. Void.
50263. Void.
50264. Void.
50265. Void.
50266. Material Industriel S.A. Improvements in mechanical tampers. With a vertically movable frame carrying tamping tools and means in the lower pipe to minimise speed of descent of frame.
50267. Dunlop Rubber Company Limited. Improvements in tyre moulds. Comprises a top mould part, a bottom mould parts and a segmentally formed annulus.
50268. Etablissements NEYRPIC. Gate arrangement for regulating the flow of liquids. Masking member associated with the gate co-operate with a sill member to keep the flow constant.
50269. Etablissements NEYRPIC. Improvements in automatic hydraulic gates. One of the two counterweights located in vertical plane of the pivot pin when the gate is in one of the regulating positions.
50270. Hoover Limited. Improvements relating to electric irons. Has an electrically heated sole plate carrying a flash boiler communicating with steam openings.
50271. George Royston & Son Limited and D. B. Royston. Improvements in or relating to the manufacture of ammonium sulphate. Circulating magma containing ammonium sulphate crystals to provide a continual supply of such magma in the region of the saturator where super-saturation takes place.
50272. Ciba Limited. Process for the manufacture of new aminopyridazones. Pyridazone-(6)-compounds containing in 1-position an unsaturated cyclic residue,

in 3-position no substituents, and in 4-position a substituent convertible into an amino group, are reacted with ammonia or amines to produce 4-amino-pyridazone-(6)-compounds.

50273. Void.

SEPTEMBER 17.

50274. Void.
50275. P. N. Contractor. Improvements in or relating to flushing cisterns for water closets or the like. Having U-shaped inverted syphon with a ballcock water inlet arrangement adapted to raise liquid level on actuation into syphons yoke.
50276. Societe Des Etablissements Barbet. Improvements in and relating to the purification of alcohol. Replacing known methods of hydro-selection or purification by "super-purification" effected under vacuum and at low temperature.
50277. Dunlop Rubber Company Limited. Improvements in pneumatic tyres. (October 14, 1952.) Comprising an articulated hoop of rigid segments separated at their inner peripheries by flexible spacing strips and a pair of sidewalls attached one to each side of the hoop.
50278. Armstrong Patents Co. Limited, formerly Armstrong's Patents Company Limited. Improvements in valves for telescopic hydraulic shock absorbers. (September 22, 1952.) Valve spindle projecting from, fixed with respect to and of smaller cross-section than mouth of tube, valve plate slidable on spindle and adjustable elastic pressure means external to tube maintaining the plate in crossing contact with tube mouth.
50279. Armstrong Patents Co. Limited. Improvements in or relating to hydraulic shock absorbers. (August 1, 1953.) Valve member rigid with slidable shaft and slidable valve member maintained in contact together in closing position by resilient mechanical, namely spring, pressure in passage way in valve chamber.
50280. Stebler-Saner. Method for the manufacture of lamp shades, luminous and advertising signs, embossed articles and the like from synthetic resins. Wherein the inlays are introduced into the mould between glass fleeces or painted thereon and then self-hardening resin filled in.

50281. E. Gretener. Television projection apparatus. Of the kind which controls the light flux of a source point by point with the aid of a liquid adhering to the surface of a rotating support.

50282. L. S. Perez. An automatic take-up attachment for fly shuttle handloom. Comprising a spring controlled lever operated by the slays, a pawl actuated by said lever and a ratchet wheel driving a take-up roller.

SEPTEMBER 18.

50283. The Florida Industrial Laboratory, Inc. Improvements in or relating to process for, and a decorticator adapted for, the recovery of textile fibres from cane plants. Advancing stalks containing fibres longitudinally towards a stripping point where the direction of advance of the stalks is sharply changed whereby the tubular fibre layer is split open.

50284. W. A. Bechtler. Roller-blind having pivoted slats. Wherein the slats, by means of two sets of straps are interconnected and are at the same time connected, by means of a roller, with a raising and lowering member.

50285. Standard Telephones and Cables Limited. Improvements in or relating to timing equipment. (September 19, 1952.) Comprising a store, means for periodically examining the store and control circuit associated therewith.

50286. Pilkington Brothers Limited. Improvements in or relating to methods of and apparatus for manufacturing toughened bent glass. (September 20, 1952.) Heating flat glass to its softening temperature and warping itself about a forming member and continually supporting the glass to each side of the bend by yielding plane members.

50287. Ciba Limited. Process for the manufacture of dehydrogenation compounds of the pregnane series. Pregnane compounds, which contain in one of the positions 11- and 12- a hydroxyl group and in the other position a halogen atom are treated with a heavy metal of the second sub-group of the periodic system in an acid or an alcohol.

SEPTEMBER 19.

50288. Void.

50289. H. Neidhart. Improvements in or relating to resilient suspension systems for vehicles. Relative movement of

chasses and axle assembly confined to straight line by links of equal length that are respectively pivoted to the chassis.

50290. J. Jozif and K. Venygr. Engine block with swingable drive mechanism, more particularly for single wheel-track motor vehicles such as motor cycles. Drive mechanism formed of a cantilever mechanism carrying the rear wheel and suspended rockably by a forked part on the gear box of the engine.

SEPTEMBER 21.

50291. The English Electric Company Limited. Improvements relating to electric motor control systems. (September 30, 1952.) Of the kind including change over means effective when operated to introduce dynamic bracking by disconnecting a slip ring type induction motor primary winding from the A.C. supply and connecting it instead to a D.C. supply.

50292. M. N. Mashruwala. Pickers for looms, specially for jute looms. A jacket is placed in between the last layer of hide forming the body of the picker and the jacket is exposed at both the sides so as to receive the force of the shuttle in a direction breadthwise of the jacket.

50293. Void.

50294. Pearl Varnish Company Limited. Improvements in or relating to coating compositions. (September 30, 1952.) Comprising film-forming binder and 10 to 45 per cent. by weight of cellular material of low thermal conductivity like diatomite.

50295. Void.

50296. Void.

50297. M. Floro. Process of obtaining water white oil from fresh coconut meat. Pressing the cocoanut meat, cooling the cream obtained, agitating and heating, the cream and then separating the oil from the cream and finally filtering and pasteurising the oil under vacuum.

SEPTEMBER 22.

50298. Calor-Emag Elektrizitats-Aktiengesellschaft. Space saving switchboard structure of the cubicle type with double bus-bar system. Switch board structures of the cubicle type with double bar systems and preferably of the "draw out" type.

50299. N. V. De Bataafsche Petroleum Maatschappij. Process for carrying out reactions between hydrocarbons, which reactions are accelerated by catalyst of an acid nature. Solid, capillary-active hydrogen exchanging resin gels which are stable under reaction conditions are used as catalysts.
50300. The Chloride Electrical Storage Company Limited. Improvements relating to lead acid accumulators. Comprising calcium from 0.03 to 0.01 per cent. tin from 1 to 2 per cent., aluminium from 0.01 to 0.1 per cent. and balance lead.
50301. The Chloride Electrical Storage Company Limited. Improvements relating to the grids of lead acid electric accumulators. Containing 6-12 per cent. antimony, 0.3 to 3.0 per cent. tin and balance lead.
50302. J. E. Wheeler, F. G. R. Vowles and G. Greenstone. Improvements in or relating to shaving brushes. The handle of the brush is provided with a reservoir for the reception of cream, a nozzle communicating with the reservoir and a slidably operable plunger to force out the shaving cream.
50303. F. Ljungstrom. A method and apparatus for heating liquids and to exchanging of heat between the liquids. Liquids on opened sides of a wall are subjected to frictional action to produce heat.
50304. Societe D'Electro-Chimie D'Electric-Metallurgie Et Des Acieries Electriques D'Ugine. Improvements in or relating to the desulphurisation and desiliconising of cast iron. (July 27, 1953.) Treating cast iron with a slag having substances for desulphurizing and a quantity of oxides to effect oxidation of silicon.
50305. Acrow (Engineers) Limited. Improvements relating to shuttering systems. Juxtaposed panels and channel section soldiers between panels all secured together by clamps engaged in slots in their flanges, soldier clamps providing runways for waling tubes.
50306. "Metapic" S. A. Unwinding and releasing means for the warp beam of weaving looms. Driving means for the unwinding the warp beam, constant amplitude oscillating member actuating said driving means, spring recoil means, a brake to arrest the driving means during return movement.
50307. "Metapic", S. A. Driving means for heddle frames in weaving looms. Comprising an oscillating lever pivoted to the end of a connecting rod journalled around a fixed shaft one end of the lever being connected to the traction element of a heddle frame, curved surface terminating the other end of the lever.
50308. "Metapic", S. A. Weaving loom frames and reinforcing cross-members therefor. Arranging at least one cross-member connecting the side frame at a point substantially opposite the picking stick.
50309. "Metapic" S. A. Weaving loom cloth beam supports. Comprising one curved rack at each side of cloth beam to support the same, means to guide said racks longitudinally, an axle parallel to the cloth beam, toothed pinions keyed to said axle.
50310. "Metapic" S. A. Return movement device for weaving loom heddle-frames. An operating lever connected to each heddle frame for displacing the same downwardly and resilient means urging the heddle frame upwardly.
50311. "Metapic", S. A. Frame construction for weaving looms. Forming the frame with wide ribs one of which is extended and oriented to form rib and lateral wall of a housing adapted to protect principal elements of the loom.
50312. "METAPIC" S.A. Damping device for the picker-stick of weaving looms. Comprising a flexible strip, guiding organs for the strip, fixed elements in contact therewith, elastic elements inserted between the ends of the strip and their respective supports.
50313. Void.
50314. Void.
- SEPTEMBER 23.
50315. Void.
50316. British Insulated Callender's Construction Company Limited. Improvements in the making of concrete foundations. (October 15, 1952.) Mould of thin flexible non-metallic material of sufficient strength placed and having base larger than mouth placed in hole and around foot of tower or pole, filled with wet concrete to embed the foot.
50317. Bechtler & Co. Actuating device for jalousies. Wherein the winding shaft is coupled to the swivelling assembly by two overrunning clutches, each operative in one direction.

50318. Graetz Kommandit-Gesellschaft. Improvements in and relating to incandescent hurricane lamps. (August 20, 1953.) Characterized in that bottom edge of lower casing bears partly on fuel container.

50319. Graetz Kommandit-Gesellschaft. Improved internal chimney for fuel lamps. [Addition to No. 47489.] The mixing tube is clamped to the internal chimney.

50320. W. J. Nickerson. Culture medium. Species of the genus *Candida* grown on a medium containing a bis-muthyl hydroxy sulphite.

50321. Imperial Chemical Industries Limited. Manufacture of alkylcyclo-alkyl substituted dimethyl phenols and their application in the stabilisation of natural and synthetic rubbers. (October 16, 1952.) Reacting in the presence of an acid catalyst 2:4(dimethylphenol and an α -alkylcycloalkene.

50322. Rodi & Wienenberger Aktiengesellschaft. An elastic one-legged link-band of the scissor-like opening and stretching type. Consisting of a plurality of elongated box-like links provided with two lateral slots, a plurality of coupling members connecting said links.

50323. I. Nordviste. Metallic structural elements. Angle shaped member with rows of circular openings and slit shaped openings with semi-circular ends in broad flange distance between centres of adjacent circular openings is equal to the length or half the length of that between centres of ends of slits, which is equal to distance between rows.

50324. F. J. Collin A. G. Process for the recovery of sulphates and iron compounds from solutions of ferrous sulphate and sulphonic acid, especially waste pickle liquor. Treating with gases containing NH_3 , H_2S and H.CN to obtain $(\text{NH}_4)_2\text{SO}_4$; $\text{Fe}(\text{OH})_2$, iron-cyanide and FeSO_4 .

50325. Harry Ferguson of India Limited. Improvements in or relating to tractor wheels. (September 25, 1952.) Lateral extensions provided on inner wheel proper in an endless series to provide substantial support for the tractor in soft soil or mud.

50326. Rodi & Wienenberger Aktiengesellschaft. A stretchable link-band. Consisting of a plurality of box-links, springs arranged within said links and

sheet metal members extending through openings in said box-links, coupled to adjacent links.

SEPTEMBER 24.

50327. N. V. De Bataafsche Petroleum Maatschappij. Preparations for combating fungi. Containing one or more compounds of the group of N-disubstituted-nitrosoaniline compounds or their salts in association with a solid or liquid carrier in a concentration of 0.01 to 50 per cent. of the preparation.

50328. Prof. D. T. Reichstein. Derivatives of a new active substance from adrenal glands and process of making them. Aldosterone is reacted with known manner with any agent ordinarily used for esterification, etherification, acetalisation, enolisation and the like.

50329. Void.

50330. Void.

50331. A. Kundert. Improvements in or relating to refrigerating plant. A compression refrigerating system in which a portion of cooling fluid having the compressor is used to a frame near refrigerating plate.

50332. M. I. Mantshev. A medical appliance. Comprising a ring shaped body, the major portion of its periphery being formed of elastic body and the remaining portion of rigid material.

SEPTEMBER 25.

50333. Void.

50334. The General Electric Company Limited. Improvements in or relating to the manufacture of electrical devices having a sealed evacuated envelope. (October 1, 1952.) Electric device with a hole registering with a hole in exhaust chamber, the device is then heated and after introduction of the envelope filling, if any, a washer is applied from the exhaust chamber, to the glass surface of the electric device, in or around the hole.

50335. The General Electric Company Limited. Improvements in or relating to apparatus for determining whether the speed of movement of a conducting or magnetic object differs from a predetermined speed. (October 3, 1952.) Including an inductor member comprising a transformer having a winding energised by pulsating current or A.C., and a secondary winding or windings on

the same core and timing means responsive to the duration of the disturbance of electromotive forces due to the passage of the object, providing an indication of action of the disturbance is of less than predetermined value.

tension depressant and an acid buffer system.

SEPTEMBER 28.

50345. Void.

50346. Koppers Company, Inc. Gasification of fuels. Gaseous reaction products are flown counter-currently with the moving fuel of fixed bed.

50347. Morris Motors Limited. Improvements relating to weather-excluders and the like for doors and windows. (September 27, 1952.) Wherein the spring clips are of single-channel formation and the attachment portion of the rubber strip is pierced by longitudinal slots through each of which a limb of one of the spring clips is threaded.

50348. Debabrata Sen. A device for the production of perfumed or medicinal or insecticidal atmosphere. Comprising an absorbent material soaked with perfume or insecticide placed in contact of a source of heat.

50349. Silver Engineering Works, Inc. Continuous process for drying, preheating, and devolatilization of low rank fuels. Fuel is subjected to partial but incomplete combustion in a heat exchanger zone.

50350. Aktiebolaget Svenska Flaktfabriken. An improved method and apparatus for supporting and conveying web-like materials along a transporting path. Gaseous medium is supplied towards the lower side of the web-like material and is conducted away in the same direction as the transporting direction of said material.

50351. Void.

50352. E. Bühner. Method and device for the mechanical manufacture of moulds from compressed granular mass. Granular mass is poured in over and above the required amount and is held in position by means which increases the height of the moulding box.

50353. National Lead Company. Flotation process for treating ore concentrates. Comprising adding to titaniferous concentrate a collector, a frother consisting of an alkali metal hexameta-phosphate and an acid to render the bath acidic.

50354. Radio Corporation of America. Semiconductor devices. Characterized by an arrangement which predetermines the sequence of application of

50336. Hayters Limited and Pullman Spring-Filled Company Limited. Improvements in and relating to apparatus for cutting and treating grass and the like. (September 26, 1952.) Comprising a rotary fan in a housing, a conduit leading at one end to the housing and crop cutting means at the other end of the conduit, said cutting means consisting of flat plates with coplanar knives at their peripheries.

50337. Gutehoffnungshütte Oberhausen Aktiengesellschaft. Improved method and apparatus for treating molten iron. Treating iron melt with magnesium in a form between pure magnesium and a pre-alloy containing at least 40 per cent. magnesium, magnesium being introduced through an apparatus arranged outside the treatment vessel.

50338. Ajoy Kumar Ghosh. Improvements in and relating to electric switches. [Addition to No. 47803]. A switch as in No. 47803 provided with a snap action connector operated by push knob.

50339. Council of Scientific and Industrial Research. Manufacture of physiologically active compounds from *Cissampelos pareira* Linn. (Menispermaceae.) Reacting the alkaloid hayatin with organic halogen or sulphur compounds.

50340. Council of Scientific and Industrial Research. Isolation of a new alkaloidal constituent from *Cissampelos pareira* Linn. (Menispermaceae.) Extracting the plant with water or an organic polar solvent, adding alkali to the extract and removing subsidiary alkaloidal constituents.

SEPTEMBER 26.

50341. Void.

50342. Void.

50343. Ciba Limited. Process for the manufacture of dihydropyridazines. Alkylating the hydroxyl group in 1-R-3-hydroxy-6-oxo-1:6-dihydropyridazine.

50344. Ortho Pharmaceutical Corporation. Spermicidal compositions. Comprising aliphatic acid, a surface

operating voltages to the respective electrodes as the transistor is inserted in the socket.

50355. K. K. Rottcher. Self-propelled, automatic, overhead irrigation plant. Comprises a wheeled vehicle chassis carrying a water pump, motive power, an inlet for the water and means for delivering in the form of a spray over the ground.
50356. Kanshi Ram Khosla and Karan Raj Khosla. A water cooler. A coil is housed in an ice containing chamber and is connected to a water storage chamber.

SEPTEMBER 29.

50357. Essoldo Circuit (Control) Limited. Improvements relating to the actuation of electromagnetic relay means. (September 4, 1951.) [Divided out of No. 46599, ante-dated to January 25, 1952.] Current amplifying device of low input circuit and high intensity output circuit; relays is connected to current responsive means in output circuit energised in succession when contacts in input circuit are successively bridged.

50358. Firth Sterling, Inc. Improvements in or relating to a method and apparatus for reducing ores and the like. Dry reducing gas under pressure from an inner chamber transversely passes through the ore as the ore passes downwardly through the ore-treating chamber, the chamber being formed between the two annular chambers.

50359. Dunlop Rubber Company Limited. Improvements in or relating to pneumatic tyres. Comprising a series of contiguous overlapping triangular shaped convolutions located in between the carcass and the running surface of the tread.

50360. Powers-Samas Accounting Machines Limited. Improvements in or relating to apparatus having a member movable between active and inactive positions thereof and to means for retaining the member in an active position thereof such as for a decoding unit. (October 31, 1952.) Comprising actuating means to move a machine member from inactive to active position, a solenoid whose pole is engaged by said member in its active position, circuit to energise the solenoid to retain the said member in its active

position and an element to restore the said member to the inactive position on non-energisation of the solenoid.

50361. Cognate with application No. 49164, dated March 11, 1953.
50362. Cognate with application No. 49205, dated March 17, 1953.
50363. Void.
50364. Void.
50365. Void.
50366. Industrial Synthetics Corporation. Improvements in hose, hose-sprinklers and method of making the same. Made of elastomeric materials, extruded to form a plurality of tubes side by side.

SEPTEMBER 30.

50367. The Monotype Corporation Limited. Improvements in or relating to sheet-feeding mechanism for photo-composing machines. Comprising cylindrical support for light-sensitive sheet with sheet-registering devices.
50368. Chinoin Gyogyszer—Es Vegyeszeti Termekgyara R.T. Improvements in or relating to the preparation of 1-phenyl-2-dihaloacetamido-1:3-dihydroxypropane and its derivatives. By reacting aminoalcohols with esters of halogenated keto-butyric acids.
50369. Radio Corporation of America. Phase comparison circuit comprising a semiconductor device. Using a semiconductor device having two equivalent electrodes and a third electrode.

OCTOBER 1.

50370. Void.
50371. D. Napier and Son Limited. Turbo machines having adjustable guide blades. (October 3, 1952.) Blades angularly adjustable about radial axes by lever arms, each attached by one end to one blade; other ends of levers connected to common adjusting member which is more rigid axially than radially and permits radial relative movement of the arms.
50372. D. Napier and Son Limited. Turbo machines having adjustable guide blades. (October 3, 1952.) Angularly adjustable guide blades extending between annular members pivoted therein about radial axes and non-adjustable guide blades interspersed at intervals connected to both the annular members.

50373. The Canadian General Electric Company Limited. Dynamoelectric machine rotor. (October 11, 1952.) Having a pole body integral with the rotor body, a detachable pole shoe and a coil surrounding the pole restrained from outward movement by the pole shoe.

50374. Bohme Fettchemie G.m.b.H. Prescuring and bleaching of textile fibres. Subjecting the material to a pre-treatment with bacteria or enzymes decomposing pectin.

50375. Byk-Gulden Lomberg Chemische Fabrik G.m.b.H. Process for the preparation of a medicine effective against diseases of the liver, gall, stomach and intestines. Cultivating bacillus subtilis var indolus in a protein-free nutrient medium.

50376. Maskin Aktiebolaget Plavia. A process and an apparatus for separating solids from suspensions of solids in fluids. Causing the suspension of flow in a tangential direction to a curved perforate wall and giving the suspension a continuously deflecting movement.

OCTOBER 3.

50377. Void.

50378. R. H. Abplanalp. Improvements in or relating to a foam dispensing head for an aerosol container. Providing an actuator on the dispensing head for operating a valve for controlling the delivery of foam from the container, the actuator being movable in a direction transverse to its operating movement.

50379. Void.

50380. N. V. De Bataafsche Petroleum Maatschappij. Process for the catalytic treatment of hydrocarbons with periodic regeneration of catalyst. Wherein to regenerate the catalyst, a regeneration gas is introduced at a place such that it does not come into contact with material of the apparatus containing sulphur or oxygen before contacting the catalyst.

50381. Dansk Industry Syndikat Compagnie Madsen A/S. Return and buffer mechanism for automatic shooting weapons. Two helical springs act respectively as return spring and buffer spring and a part of the return spring guide coacts with a screw for tensioning the return spring.

50382. Stamicarbon N. V. Apparatus for continuously carrying out reactions with solids in the fluidized state. Comprises plurality of vertical chambers, each chamber being in lateral communication with two others, wherein solids are fed in one and gas through grids at the lower end.

OCTOBER 5.

50383. Swami Vimuktananda. Striking mechanism for producing sound on suspended objects. Comprises two hammers on opposite sides of the bell, which are so arranged as to deliver two simultaneous strokes from opposite sides.

50384. Courtaulds Limited. Improvements in and relating to the production of artificial threads, fibres, filaments, films and the like. Extruding a solution of acrylonitrile copolymer in dimethyl nitrosamine into a coagulating bath containing potassium acetate, sodium acetate, calcium chloride or zinc chloride.

50385. D. Trapow & Company Limited. Improvements in or relating to labelling apparatus. (October 31, 1952.) Comprising means carrying a stack of labels with their edges engaging on gum roller rotating in the direction to move off the edge away from the label and means for periodical relative movement between carrying means and roller such that the label will move transversely of the radius of the roller at the line of contact.

50386. Imperial Chemical Industries Limited. Improvements in or relating to the manufacture of alkyd resins. (October 15, 1952.) Characterized in adding methyl or ethyl methacrylate after rapid polymerization has ceased.

50387. Reynolds Metals Company. Electrolytical production of metallic solids. Comprising forming a molten anhydrous electrolyte containing at least one halogen compound of the metal and at least one halogen metal compound selected from the metals more electro-negative, electrolysing the electrolyte within a cell in contact with a cathodic liquid selected from the group consisting of mercury and amalgam.

50388. R. G. Le Tourneau. Electromagnetic brake. Axially slidable friction elements carried by stator and

rotor members and non-magnetic connecting studs slidably mounting pressure plate and support means for friction elements on stator.

50389. Cognate with application No. 49545.

50390. The Khatau Makanji Spinning and Weaving Company Limited. Apparatus for counting neps and other defects in cotton and like fibrous textile materials. Comprising illuminator part for passing light through a layer of cotton or like fibre and an instrument part comprising means for throwing magnified image on ground glass screen and means whereby object glass carrying said fibre may be moved forward backward or sideways to any desired extent in rectilinear direction.

50391. Void.

50392. Void.

50393. K. Abildgaard-Elling. A method for the production of 21-esters of adrenal cortical hormones and other 21-hydroxy-steroid compounds with amino-carboxylic acids, and salts of these esters. (October 6, 1952.) 21-hydroxy-steroid compound is reacted with a salt of an acid-halogenide of halogeno-carboxylic acid, and then the halogenated ester is treated with ammonia or an amine.

50394. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric discharge tubes comprising an oxide cathode. The carrier metal contains 1 to 10 per cent. by weight of metals reacting with alkaline-earth metal compounds and 0.03 to 0.25 per cent. by weight of metals which can separate alkaline earth metal from alkaline-earth oxide.

OCTOBER 6.

50395. Void.

50396. B. Singh. Improvements in or relating to regulators and particularly regulator switches for fans. Comprises a series of projections, a contact arm, an auxiliary arm, wherein the use of the ball or spring is avoided.

50397. K. H. Danckert. Improvements in or relating to a guide device for ropes, band webs, industrial belts or the like. The guiding surface of the grooved pulley has the shape of a hyperbolic surface of rotation.

50398. The Firestone Tire and Rubber Company. Improvements in apparatus

for measuring length change of strip material. The apparatus comprises two master synchronous electrical controllers rotated one by a roller over which the fabric enters the processing unit and the other by a roller over which the fabric leaves the unit, the master controllers controlling two slave controllers which impart mechanical rotation to a differential gear mechanism which enables to record the change in strip length.

50399. Ludlow Manufacturing & Sales Co. Improvements in or relating to the production of jute yarns, and woven fabrics and carpets made therefrom. Treating jute fibers by applying water thereto and also applying about 4 per cent. to 9 per cent. of an oil composition made up of a petroleum oil and a drying material dissolved therein and forming yarn from fibers thus treated.

50400. Buffalo Electro-Chemical Company, Inc. Stabilization of peracids. Peroxymonosulfuric acid is stabilized by incorporating dipicolinic acid therein.

50401. L. Benard. Hydraulic shock absorbers for suspension. A passage for damping liquid is provided through the piston with a calibrated constriction limited between a member solid with the piston and a second member which is movable.

50402. Robert Aebi and Cie A.G. Attachment for tunnel furnace. Refractory cover of each car top is so formed that its middle section is horizontal and its side sections incline upwards making obtuse angles with the middle section.

50403. Robert Aebi and Cie A.G. Tunnel furnace with additional heating plant. Tunnel furnace with additional heating plant in combination such that flue gases from heating plant passing through air preheater are driven by means of a fan partly back into additional heating plant.

50404. Koppers Company, Inc. A process for recovering ammonia from ammonia containing gas. Spraying dilute sulphuric acid saturated with ammonium sulphate and regulating temperature of the solution so as to retain major portion of heat of reaction, collecting the spray and recovering ammonium sulphate therefrom.

50405. May & Baker Limited. Improvements in or relating to heterocyclic compounds. (October 6, 1952.) Void

after publication. Heating together a thioamide and carboxy hydrazide.

50406. May & Baker Limited. Improvements in or relating to tetrazines. (October 6, 1952.) Oxidising 1:2-dihydro-1:2:4:5-tetrazine containing a heterocyclic group in 3 and 6 positions.
50407. May & Baker Limited. Improvements in or relating to tetrazolium compounds. (October 17, 1952.) Void after publication. Condensing a diazonium salt with a hydrogen.
50408. Industriaktiebolaget Luxor. Improvements in tone arm devices in phonographs. Member carried by a separate support arm rotatable in a plane parallel to tone arm rotating plane, the tone arm being supported by the support arm initially, and after that by the support arm with the member engaging the record is brought outwards where the member drops outside record, thereby the needle engaging the record and separating the support arm from the tone arm.
50409. W. F. DePenning. Method and apparatus for producing hollow blown articles from thermoplastic materials. Injecting material onto a transferable ventiel located in the injection moulding machine and transferring to blow mold to form finished article.
50410. Void.
50411. Void.
50412. Cognate with application No. 49633, Dt. May 25, 1953.
50413. Ciba Limited. Complex cobalt compounds and process for their manufacture and their use. Reacting an agent with a monoazo-dyestuff of the formula $R-N=N-A-NH_2$, in which R is a hydroxybenzene residue and A is a naphthalene residue.
50414. Void.
50415. F. Hoffmann-La Roche and Co. Aktiengesellschaft. Process for the manufacture of 2-methyl-pyridine-4-carboxylic acid derivatives. Reacting 2-methyl-pyridine-4-carboxylic acid hydrazide with a carboxyl compound.
50416. Void.
50417. Dr. Moti Lal Jain. Improved connector between an inflater (air pump) and article to be inflated. Consisting of a threaded tube, a body, a cap and a piece with a hole made of elastic material.
50418. Void.
50419. J. P. Singh. Improved spring-cushioned push bicycle. Wherein main frame is supported on front and rear spindles by means of a pair of vertical quadrilateral frames having pin joints.
50420. Vereinigte Aluminium-Werke Aktiengesellschaft. Continuously formed electrodes for electrolytic furnaces. Preformed and preburned carbon blocks are joined to the exposed end of the electrode as the other end is consumed.
50421. D. Napier and Son Limited. Improvements in or relating to gearing. (October 20, 1952.) One or the other or both of a small diameter pinion of appreciable length and a relatively large diameter pinion are elastically mounted to permit relative angular displacement.
50422. M. Floro. Board forming machine. Comprising a rotatable cylindrical drum, means for heating the drum, a multiple of cylindrical rollers arranged circumferentially around the main drum and a material conveying means.
50423. N. V. Philips' Gloeilampenfabriken. Improvements in or relating to cathode-ray tubes, more particularly for colour television. Consisting of a cone which is closed at its wide end by means of a glass window, a glass plate insulated by supporting members, fitted near said window.
50424. N. V. Philips' Gloeilampenfabriken. Improvements in or relating to X-ray photography devices comprising an optical mirror system. A cassette moved into the image beam is adapted to be shifted in the direction of the optical axis and occupies the position intended for taking a photograph due to adapting surfaces provided on the cassette being urged against fixed points of support.
50425. N. V. Philips' Gloeilampenfabriken. Improvements in or relating to receivers for frequencyshift telegraphy. In which the demodulated signals are supplied via series capacitors to peak-voltage rectifiers passing current in opposite direction and having a common output resistor of which a central tapping is connected to a pulse repeater.
50426. N. V. Philips' Gloeilampenfabriken. Improvements in or relating to

OCTOBER 8.

- methods of manufacturing 2,5-dichloro alkali phenolate. Reacting hexachloro hexane with alkali hydroxide in presence of methanol at 160—180°C.
50427. Metropolitan-Vickers Electrical Company Limited. Improvements relating to railway track signalling systems. (October 27, 1952.) There are provided transmitting means for feeding the track with pulses, and relays differently responsive to pulses of different polarity to control the track signals.
50428. Dr. Ing. H. Scholler. Process for the production of cellulose. For each 1000 kg. of raw material more than 12 cu.m of cooking liquid are caused to react during cooking under pressure.
50429. Farbwerke Hoechst Aktiengesellschaft Vormals Meister Lucius & Bruning. Manufacture of diazo-dyestuffs insoluble in water. (November 17, 1952.) Reacting tetrazo compound of 4:4'-diamino-3:3'-dichlorodiphenyl with acetoacetyl amino benzene.
50430. Douglas Fraser & Sons Limited. Improvements in or relating to fibre softening machines. (October 10, 1952.) The two side shafts of a fibre softening machine are positively connected to be driven by a motor accommodated wholly within the confine of the machine.
50431. Cognate with application No. 49801.
50432. The British Thomson-Houston Company Limited. Improvements in and relating to electric discharge devices. (October 22, 1952.) The cathode having a protective layer between the base metal and the electron emissive layer.
- OCTOBER 9.
50433. Parke, Davis & Company. Therapeutically valuable esters and methods for obtaining the same. Reacting an acid addition salt of 1-p-nitro-phenyl-2-aminopropane-1, 3-diol with acyl halide or acyl anhydride and N-dichloroacetylating the product formed.
50434. Parke, Davis & Company. Process for producing therapeutically valuable esters. Reacting a Schiff base with a palmitoyl halide or palmitoyl anhydride, hydrolyzing the 3-acyloxy compound so formed and then N-dichloroacetylating.
50435. The General Electric Company Limited. Improvements in or relating to methods of forming P-N junctions in crystalline semi-conducting materials. (October 15, 1952.) By depositing fused material of one conductivity type on a seed crystal of material of the opposite conductivity type in an inert atmosphere.
50436. Smith Kline & French International Co. Pharmaceutical tablet or pellet and method of preparing the same. Comprising non-time delay granules of a medicament and time delay granules consisting of the medicament dispersed in a material resistant to disintegration and slowly dispersible in the gastrointestinal tract.
50437. Chas. Pfizer & Co., Inc. Antimicrobial agents. Chlortetracycline antibiotic is contacted with hydrogen in the presence of a catalyst.
50438. Wurster and Sanger, Inc. Improvements in or relating to process of preparing vegetable oil bearing material for solvent extractions. Heating the material at a temperature of 140 to 230°F, adjusting the moisture content to about 10 to 26 per cent. in the early stages of heating and reducing the moisture content in the latter stages of heating.
50439. Societe Anonyme Pour Les Applications De L'Electricite Et Des Gaz Rares—Etablissements Claude Paz & Silva. Electrode for electric discharge apparatus. The face of the support of the emissive material has a generally concave shape, the peripheral zone being free of emissive materials.
50440. Esso Research and Engineering Company. Improvements in or relating to treatment of hydrocarbon distillates with hypochlorite solution. Hypochlorite treated hydrocarbon distillate contacted with a solution consisting of water, alkali metal hydroxide and an alkali metal mercaptide.
50441. James Beresford and Son Limited. Improvements relating to submersible electrically driven pumps. (May 26, 1953.) Incorporating a motor section embodying a submersible casing, a single phase, split phase, squirrel cage induction type having a main winding and starting winding and a control relay within said casing.
50442. The Scindia Steam Navigation company Limited. Improvements in or

relating to paints. Containing synthetic medium of alkyd group as vehicle for pigment.

50443. The Scindia Steam Navigation Company Limited. Improvements in or relating to paints. Containing product obtained by cooking phenolic resin with tung oil as vehicle for pigments.

OCTOBER 10.

50444. S. S. Shrivastava. A system to produce illusion of depth in the pictures obtained by photography and television. Additional convex or concave lens is used before photographic or television camera in such manner that the entire depth of field produced by the said lens in the form of image field is coincided by the depth of field of camera lens.

50445. S. S. Shrivastava. Improvements in or relating to a system to produce illusion of depth in the pictures obtained by photography and television. [Addition to No. 50444]. Concave or convex spherical mirror is used before photographic or television camera in such manner that the entire depth of field produced by said mirror in the form of image field is coincided by the depth of field of camera lens.

50446. The General Electric Company Limited. Improvements in or relating to automatic telephone systems. (October 14, 1952.) There is an amplifier in the pair of lines connected to the subscriber's line equipment and means to vary the gain of the amplifier depending on the current flowing through wires.

50447. The General Electric Company Limited. Improvements in or relating to methods of forming P-N junctions in crystalline semi-conducting materials. (March 31, 1953.) Comprises the steps of producing on top of a solid body a quantity of molten state, the molten material includes at least the impurity of opposite conductivity type.

50448. J. Rochat. Ignition spark generator. The two electrodes are connected by a conducting zone consisting of a layer of colloidal metal applied to an insulating support.

50449. American Home Products Corporation. Improvements in or relating to preparation of therapeutic compositions. Table salt is coated with an organic compound which is active against malarial micro-organism.

50450. F. E. Myard. Improvements in or relating to pumps for liquids. (September 1, 1953.) Comprising a double-acting piston which operates simultaneously with a continuous rotary movement and a translatory straight line reciprocatory movement.

50451. PERFOGIT Societa per Azioni. Process for the preparation of esters of carboxylic acids of low solubility in alcohol. Carboxylic acids are first esterified with alcohols having 4 or more carbon atoms in their molecule or with polyvalent alcohol and the reaction product is submitted to ester interchange with methyl, ethyl or propyl alcohol.

OCTOBER 12.

50452. P. M. Mehta. Improved flat file for filing documents. The inside front cover is provided with auxiliary members for joining temporarily with the main filing members.

50453. Void.

50454. S. P. Kambli and N. P. Kambli. An educational game based on the commercial geography of the world. Comprising world map or its part with routes marked, as a playing board, each player moving a pawn on these routes depending on figures cast by dices and mock currency notes with playing for buying and selling commodities at places reached, as given in Information Cards, the buying and selling prices determined by indicator whose pointer also moved according to figure cast by dices, the game terminated after fixed time.

50455. Void.

50456. James Burn & Company Limited. Improvements in and relating to book binding. (October 13, 1952.) Comprising perforated sheets bound by staples formed of separate length of wire the central portion of which is straight and the end portions of which are rings.

50457. Harry Ferguson Limited. Improvements in or relating to load-lifting attachments for tractors. (October 17, 1952.) Fore and aft booms are interconnected by a cross beam and an auxiliary hydraulic actuator raises and lowers the booms around pivotal connections.

OCTOBER 13.

50458. S. & R. J. Everett & Company limited. Improvements relating to hypodermic syringes. (October 16, 1952.) Void after publication. Tube with front closure pierced by rear end of double ended hypodermic needle and slidable rear closure acting as piston, phial held in holder provided with plunger engaging rear closure and socket for mount for needle introduced sideways.
50459. Olympia Werke West G.m.b.H. An escapement mechanism for the paper carriage of type-writers or the like machines. (August 12, 1953.) Wherein the stationary dog is resiliently supported in the direction of the rocking movement, preferably by means of a leaf spring connected to the rocker.
50460. R. N. Sawalka and V. P. Harlalka. Improved jute picker. Spindle sleeve of the picker being reinforced by a metal lamination sandwiched between lamination of hide of the spindle.
50461. Wingfoot Corporation. Improvements in pneumatic tire tread. Upper sidewall portions, lower sidewall portions and a bottom portion, each respective upper side wall portions sloping at an angle of less than 15° to a line parallel to the tread radius for at least one third the depth of the grooves.
50462. Wingfoot Corporation. Roof bolt washer. Including a pair of rigid plates and a layer of rubber arranged between the plates and bonded to it.
50463. Ricardo and Co., Engineers (1927) Limited. Improvements in or relating to air cooled cylinder heads for internal combustion engines. (October 16, 1952.) Va've guide extends across the cooling air passage being directly exposed to these cooling air.
50464. Simon-Carves Limited. Improvements relating to means for separating particles suspended in liquids (July 10, 1953.) Having means for magnetising magnetisable particles, and means allowing escape of liquid and non-magnetisable particles and means for withdrawing and returning liquid and magnetic particles.
50465. John Bright & Brothers Limited. Improvements in and relating to means for stretching cords, yarns and the like. A continuous length of wet cord or yarn is made to traverse in progressively increasing loops or bights under tension whilst being heated and retaining the tension until the cord is dried.
50466. Void.
50467. Void.
50468. Esso Research and Engineering Company. Preparation of a material suitable as a carrier for a catalyst to be employed in hydroforming hydrocarbons. Mixing an aqueous solution of aluminium sulphate with an aqueous solution of sodium silicate, filtering, washing and drying the precipitate formed.
50469. Bomford & Evershed Limited. Improvements in or relating to earth levelling and grading machines. (October 17, 1952.) Void after publication. Wherein the blade mounting permits angular variation of the blade with fore and aft axes of the vehicle and is such that it has movement transversely of said axis whereby the blade end remains at same distance from said axis or moves outwardly from the axis a short distance beyond the outside of the wheel.
50470. Chemical Construction Corporation. Improvements in method for granulating urea. Heating an aqueous solution of urea and maintaining biuret content of the solution during heating to less than 5 per cent.
50471. Chemical Construction Corporation. Improvements in or relating to granulator. The granulator has a body with an inlet for the solution nozzles in the body, a chamber in the body for carrying the solution and for channels in the body for carrying the heating medium.
50472. Chemical Construction Corporation. Improvements in or relating to the manufacture of urea. The reaction is carried out in a vessel comprising copper and/or alloy of copper and nickel in which copper is in major proportion.
50473. Chemical Construction Corporation. Separation of carbon dioxide from ammonia. (June 3, 1953.) Gases are scrubbed with an aqueous solution of a weak base.
50474. National Research Development Corporation. Improvements relating to combustion systems. (December 12, 1952.) Comprising a duct for gas stream, a portion of duct having greater cross-sectional area than a portion immediately upstream, a flame stabilising

baffle so positioned in the region of the sudden enlargement as to deflect at least part of the gas stream into enlarged portion.

50475. "Shell" Refining & Marketing Company Limited. Improvements in and relating to fuels for internal combustion engines and to processes for driving spark ignition type internal combustion engines. Containing halo-hydrocarbon scavenger and cyclic organic compounds of phosphorous, arsenic, antimony or bismuth in ratio of theories between 3:2 and 100:1.

50476. Void.

50477. P. D. de Laszlo. Improvements in or relating to strengthened reinforced structures. By coating at least one layer of reinforcing material with a synthetic resin, and having a rib-like strengthening on it formed over a former.

50478. Marconi's Wireless Telegraph Company Limited. Improvements in or relating to electrical frequency spectrum analysers. (October 24, 1952.) Including a mixer, a frequency modulated oscillator and a dispersive network.

50479. Power Jets (Research and Development) Limited. Jet deflectors for aircraft. (October 21, 1952.) A circular section pipe with a jet deflector in the form of a butterfly valve.

50480. J. E. Aubanel, P. Ellis, R. I. H. Alabaster and G. P. Ellis. Improvements in and relating to process and plant for treating cork and structural materials made therefrom. Treating cork granules with a flexible moisture proofing solution and drying.

50481. National Motor Bearing Co., Inc. Improvement in seal for railroad journals. Including a flexible diaphragm having an axle receiving opening in the central portion and a diaphragm rim supporting portion expandable with means for holding it axially contracted in a parallel walled slot of the journal housing.

50482. National Motor Bearing Co., Inc. Guard bearing for protecting sealing surfaces of railroad car axles. Including a pair of J-shaped auxiliary bearing members, supported adjacent and spaced slightly from the lower half of the shaft.

OCTOBER 19.

50483. Council of Scientific and Industrial Research. Soft iodobromide posi-

tive emulsions. Using indigenous geal-tine which has been subjected to washing followed by swelling for 4-5 hours in a 0.5 per cent. to 0.6 per cent. potassium bromide solution at 25-28°C.

50484. N. P. Metal Industries. Umbrella cups. Cup member adapted to get turned and beaded after a washer member with its sides extending is press-fitted therein.

50485. Garware Finance Corporation Ltd. A device for manufacturing bottles and the like hollow blown articles from thermo plastic materials. Comprising a forming mould split into two or more parts and is adapted to get-fitted inside a mold casing which is also split into two parts.

50486. J. R. Geigy A.-G. Process for the production of trichloro-methane sulphenic acid derivatives and their use in the combating of fungi. Reacting trichloro-methane sulphenyl chloride with a sulphonic acid amide.

50487. The English Electric Company Limited. Improvements in and relating to cartridge fuse links and methods of manufacture thereof (October 24, 1952.) Wherein the explosive charge consists of a disruptive initiatory explosive material.

50488. Olympia Werke West G.m.b.H. Paper pressure guide for typewriters. (August 14, 1953.) The typewriter is provided with a paper pressure guide which extends over the front face of the paper sheet.

50489. Merck & Co., Inc. 2-Amino-5-nitrothiazole and 2-acyl-amino-5-nitrothiazole. By distributing 2-amino-5-nitrothiazole or 2-acylamino-5-nitrothiazole in a therapeutic vehicle.

50490. American Chemical Paint Company. Improvements in or relating to plant-growth regulating compositions. Comprising 3 amino-1:2:4, triazole and a diluent compatible therewith.

50491. The Dow Chemical Company. Improvements in or relating to process of making readily dyeable compositions and the compositions prepared in accordance therewith. Incorporating in a fibrous product during its manufacture and before it is dried at least 1 per cent of a dye assistant.

50492. B. Russo, W. Gutfeld and K. Popper. Improvements in and relating to the recovery of sugar. (June 15, 1953.) Sugar solution is electrolysed to

produce an insoluble precipitate, its pH is changed and the liquor is clarified by repetition of electrolysis or by physical means.

50493. Godfrey L. Cabot Inc. Process and apparatus for the production of carbon black. An atomised spray of liquid hydrocarbon having an H/C ratio of 0.75-1.25 is introduced into a heating reaction space and therein dissociated to carbon black in a turbulent zone of combustion.

50494. Charrington, Gardner, Locket and Company Limited. Improvements in or relating to boiler furnaces. Inhibiting oxidation of sulphur by injecting an organic inhibitor whereby a cloud of carbon particles above the fuel bed is produced.

50495. Usines Chimiques Des Laboratoires Francais. Process for the resolution of DL-acyltryptophanes. (September 3, 1953.) Resolution using different solubilities of salts of N-acyl-DL-tryptophane with L-(+)-threo-1-p-nitrophenyl-2-aminopropane-1,3-diol or L-(+)-threo-1-p-methylthiophenyl-2-aminopropane-1,3-diol.

50496. Creed and Company Limited. Facsimile apparatus. Including a photoconductive storage member charged to a predetermined potential, subjected to a light image producing an electrostatic image thereon and scanned by an electrical pick-up.

50497. Eckart Werke Standard Bronzepulver-Werke Carl Eckart. Improvements in or relating to a method of making a paint and other solutions. Filling the colouring matter into a receptacle made of a material which is soluble in a solvent or dispersion medium and introducing the receptacle into said solvent or dispersion medium.

50498. J. W. & H. Platt Limited. Improvements in or relating to serrated wires or strips for use in carding engines and the like. The teeth or points of the wire are so formed as to be not less than .010 in. and not more than .065 in. high.

50499. Chalerm Sakunwadhna. Floating hydraulic power plant especially for irrigation and like purposes. Comprising a floating hull or hulls connected together provided with buoyancy and ballast chambers and having formed in it or between them a longitudinal channel convergent in plan, at the narrow

end of the channel is disposed a wheel coupled to a driven machine.

50500. Leder & Co. A. G. A driving device suitable for belt drives. Fitted with a stator and a rotor, the stator being slewably journaled around a pivot axle, parallel to its longitudinal axis, in such a way that the stator's torque of reaction tightens the belt.

50501. Leader & Co. A.G. A belt pulley. With a cavity-mounted toothed gearing arranged on an arm, which is free to slow around the driving pinion.

50502. Heyden Chemical Corporation. Antibiotic and the preparation and recovery of same. Cultivating in a fermentation broth organism of species streptomyces aureofaciens with artificial or natural mutants.

OCTOBER 20.

50503. Void.

50504. Void.

50505. Imperial Chemical Industries Limited. Production of artificial films. (August 1, 1952.) [Divided out of No. 48729, ante-dated to December, 31, 1952.] Molten film is passed into a pool of water between two contra-rotating rolls and water is removed from the pool at each side of the film from the portions of the pool directly between the film and the rolls.

50506. Monsanto Chemicals Limited. Improvements relating to the spraying of textile materials with liquids. (November 11, 1952.) The liquid is taken up on a rotating wheel, cylinder or the like device and spun off by centrifugal force in the form of a fine spray which is directed on to the textile material to be treated.

50507. Wayne Tank and Pump Company Limited. Improved instrument for recording the quantity of liquid dispensed by a liquid dispensing apparatus. (October 31, 1952.) Having a rotating pointer indicating a unit per revolution and a resettable drum type counter geared therewith.

50508. The Mining Engineering Company Limited. Conveyors. (October 31, 1952.) Provided with tension and load carrying elements in which at least one of the elements is twisted on one run to transpose the elements.

50509. The Mining Engineering Company Limited. Conveyors. (October 31,

- 1952.) Having parallel tension membership carrying a flexible continuous carrying member which is supported independently of the tension members.
50510. J. V. Ferran. Method of forming integrally bonded and heat compressed wooden blocks particularly useful for picking arms for shuttle looms. Treating drywood with ammonia and fresh wood with urea.
50511. H. C. Bechtler. Improvements in or relating to a unit for air-conditioning multi-room buildings. Heat exchanger constructed of several tubes, influenced in the wall temperature by a medium, possessing at their ends entranced and exit openings, the hydraulic diameter of which tubes not exceeding 60 mm. and length of which being at least five times the hydraulic diameter, at least one exit for primary air is arranged on each tube and sum of cross-sectional areas of all exits for primary air being less than one fifth of the sum of the areas of tubes exits.
50512. Mannesmann Aktiengesellschaft. A process for increasing the casting output in continuous casting installations. The casting speed is increased beyond the rate which can be achieved with continuous casting mould by use of corrugated moulds.
50513. Void.
50514. Thomas Ashworth and Company Limited. Improvements in or relating to warp beams and the like. In a flanged bobbin with a screw thread the distance across the crests of the teeth exceeds the distance between the crests of the teeth.
50515. Hemphill Company. Improvements in or relating to methods of knitting hosiery. (January 17, 1953.) Transferring the dial loops to cylinder needles in different courses in such a manner that the transfer is started by transferring a loop from only one dial needle of a group in one course and transferring the loop from another needle of said group in a subsequent course.
50516. The British Thomson-Houston Company Limited. Improvements in and relating to control circuits for alternate series systems. (November 13, 1952.) Wherein a common reference point is provided by joining one set of nominally equipotential sides of the generators through resistances of equal value to a common point, said reference point being connected to one side of a reference voltage the other side of which is connected through controlling means to one side of the generator.
- OCTOBER 21.
50517. Rolls-Royce Limited. Aluminium alloy. (October 25, 1952.) [Additional to No. 43487]. Aluminium alloy for casting or forging composition having cadmium not exceeding 0.5 per cent.
50518. Aluminium Laboratories Limited. Improvements in or relating to casting of molten aluminium and apparatus therefor. Molten aluminium is passed through a glass cloth filter.
50519. The Firestone Tire and Rubber Company. Improvements in or relating to tire rim and combination thereof with a tire. Bead portion and the rim are tapered at an angle about 12° to 20°.
50520. The British Tabulating Machine Company Limited. Improvements in or relating to data-measuring and recording apparatus. (May 8, 1953.) Having measuring device, means for reading out as electric impulses, counter for registering them recorder operated by timed electric impulses, means controlled by the measuring device read out means for initiating recording and means for preventing the readout means from operating the counter during recording.
50521. N. V. De Bataafsche Petroleum Maatschappij. Tray deck for contact columns. Having a plurality of deck sections in each panel, the juxtaposed transverse margins of adjacent sections having stiffening flanges extending between the beams.
50522. Ortho Pharmaceutical Corporation. Pharmaceutical preparation designed for the treatment of Trichomonos vaginalis vaginitis. Acyl derivatives of 2-amino-5 nitro thiazole with a solid diluent.
50523. Void.
50524. Radio Corporation of America. A transistor amplifier. Consisting of a pair of transistors of opposite conductivity each having input and output electrodes, the input electrodes being connected in parallel.
50525. S. A. Kruse and G. R. Kruse. Machine for casting cylpebs for use in

the fine grinding chambers of cement and like mills. Molten metal poured into the moulds forming a moving endless chain and pouring water and when the molds are upside down the cylpebs are removed.

50526. N. V. Phillips' Gloeilampenfabrieken. Improvements in or relating to a method of manufacturing a connecting strip comprising a plurality of contact members insulated from one another and connecting strips manufactured by this method. A plurality of metal wire pieces are secured with their central parts insulated in a support defining the shape of connecting strip.

50527. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to connecting strips comprising a plurality of relatively-insulated contact members. Strip constituted by supporting strip having transverse grooves in which metal wires are centered in an insulating manner by a flexible ribbon material.

50528. N. V. Philips' Gloeilampenfabrieken. Improvements in or referring to connecting strips comprising a number of contact members which are insulated from each other, for example, for use in automatic telephone systems and the like. The strip consists of transverse bores in which lengths of metal wire projecting at either side is centered by insulating mass.

50529. Void.

50530. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of novel diacylated hydrazines. Reacting $R^1\text{-NHNH}_2$ with the anhydride or acylhalide of an acid $R''\text{OH}$, one of the two symbols R' and R'' representing pyridyl-4-carbonyl or 2-methylpyridyl-4-carbonyl radical and other symbol representing the acyl radical- $\text{CO-(R)-(NHR)}_1\text{}$.

50531. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of novel diacylated hydrazines. Reacting an isonicotinic acid hydrazide with a mixed anhydride of the formula $R_3\text{-CO-O-OC-(R)-(NHR)}_1\text{}$ wherein R stands for a radical of an α -amino acid from the -COOH and -NH groups on split off, R_1 for an acyl group and R_3 for an alkoxy, aryl or alkyl group.

50532. I. Uozumi, A. P. M. Nair and I. Akasaka. A locking device for hook

bolts. A hook bolt is cut a longitudinal slot on its screw threaded portion along axial direction thereof and a combined washer comprises an upper disc-like washer and a lower polygon-shaped washer.

50533. Fairbairn Lawson Combe Barbour Limited and J. R. Bee. Improvements in or relating to textile spinning twisting and like machines. (December 11, 1952). The detector element is isolated from the pressure exerted by the mechanism which on breakage of the material causes the feed rollers to be separated and to stop feeding material.

50534. Powers-Samas Accounting Machines Limited. Improvements in or relating to calculating machines controlled by statistical record cards. (November 1, 1952). Comprises a non-counting register, a first and a second counting registers.

OCTOBER 24.

50535. A/S. Chr. Fabers Fabriker. Devices for the adjustment of the angular position of venetian blind slats. Comprises a mechanism in the top support, and shafts extending longitudinally therewith, characterised in that said shafts are connected to an adjusting handle by means of a flexible shaft.

50536. The General Electrical Company Limited. Improvements in or relating to metallic compositions and their manufacture. (October 30, 1952). Comprises a major constituent composed of a basis metal or an alloy of two or more basis metals, and a minor constituent composed of a complex of a metal and a non-metal uniformly distributed in the major constituent.

OCTOBER 26.

50537. The Wellcome Foundation Limited. Improvements in and relating to to Pyrimidine derivatives and their manufacture. Reacting 2-amino-5-phenyl-4-chloro or mercaptopyrimidine with an amine of the formula HNR_1R_2 so as to obtain 2-amino-5-phenyl-4-amino-pyrimidines.

50538. E. K. Cole Limited. Improvements in or relating to moving-coil loudspeakers. (November 15, 1952). With a box like cabinet in which the front face of the baffle has one or more deep recesses surrounding the mouth of the loudspeaker diaphragm.

50539. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De Saint-Gobain, Chauny & Cirey. Improvements in the manufacture of alkali-metal hydrosulphites. The manufacture is characterised by reacting alkali-metal amalgam with a solution of alkali-metal bisulphite in hydro-alcoholic medium.
50540. Hugh Wood & Company Limited. Improvements in or relating to means for indicating faults on electrically driven conveyor systems. (December 17, 1952). With means indicating operation of each of the protective devices which is separate from other or others, the means failing to indicate belt-slip under normal conditions of stopping, or at starting, of the conveyor.
50541. Hugh Wood & Company Limited. Improvements in or relating to electrically operated signalling systems. (March 14, 1953). In circuit with signalling wires there is means operative, with the wires out of contact with each other to maintain the signalling device inactive and on failure of the wires to actuate the signalling device and opening of control circuit of driving motor of conveyor, haulage or other installation.
50542. Painter Brothers Limited and J. L. Nock. Improvements in pole and like structures for the support of electric transmission lines and other purposes. Comprising legs each embodying two or more tubular members connected each to another at spaced points along the same by horizontal cross members, the legs being connected to one another by braces extending between the cross members.
50543. Creed and Company Limited. Facsimile scanning sheet holder means. Comprises a scanning drum with fastening members, a wrapper having perforations, means of mounting the strip and protecting means.
50544. Creed and Company Limited. Means to facilitate the handling of telegraph storage tape. Comprises a telegraph storage tape, a first member having a flat plate, a second member pivotally attached to the first member, a second member having a shoe with depending sides.
50545. Standard Telephones and Cables Limited. Improvements in or relating to electric trigger circuits. (December 24, 1952). Including a pair of similar crystal triodes, an electrode of one kind of each crystal triode being connected to an electrode of a different kind of the other.
50546. Standard Oil Development Company. Improvements in or relating to a combination process for the distillation of crude oil. The reduced crude is introduced into a fractionation zone and stripped to remove hydro-carbon constituents of the gas oil boiling range, with hydrocarbon vapours produced in a catalytic cracking operation, the gas oil fraction is segregated and cracked to produce at least a portion of vapours used for stripping.
50547. The Mining Engineering Company Limited. Conveyors. (November 5, 1952). Load carrying element and tension element are separated at a point and the load carrying element is carried independently to a drum located remote from the point of separation.
50548. United States Rubber Company. Improvements in pesticidal compositions. A mineral silicate a pesticide having chlorine substitution in an aliphatic group and sodium and calcium salts.
50549. Void.
- OCTOBER 27.
50550. The Dow Chemical Company. Improvements in or relating to a magnesium-base alloy and primary cell having an anode of such alloy. The anode of cell is made of an alloy containing aluminium, zinc, calcium and magnesium.
50551. The Dorr Company. Continuously operating clarifier tanks for sewage liquids containing gritty and non-gritty solids. Combination of a cylindrical feed well, peripheral overflow launder, discharge means, rotary rakes and concentric annular grit intercepting structure in path of incoming solids.
50552. Grassols Machinefabriken N.V. Improved freezing apparatus for making ice blocks. Comprising ice-cells with cooling jackets and having an air suction pipe, the cell being closed at the upper end and open at the lower end.
50553. Dunlop Rubber Company Limited. Improvements in vehicle brakes. (November 11, 1952.) Disc brake assembly has a pair of cylinders on

either side of the disc detachably secured to the caliper straddling the disc and a plunger fluid tightly slidable in the cylinder and forcing friction pads onto the disc.

50554. Dunlop Rubber Company Limited. Improvements in disc brakes. (November 11, 1952). The brake comprises a rotatable disc, a pair of angularly movable pressure plates axially aligned one on each side of the disc and pivotally secured to a non-rotatable member and a mechanically operated mechanism to angularly move the plates towards the disc.

50555. Olympia Werke West G.m.b.H. Improvements in or relating to typewriters suited for oriental languages. (August 14, 1953). Characterised in that for the limitation of the stroke of the loose escapement dog a control lever is provided which is operatively connected to an actuating bar.

50556. American Chemical Paint Company. Improvements in or relating to the coating of aluminium surfaces and to compositions therefor. (April 7, 1953). By treating the surface with a solution containing hexavalent chromium, a fluorine compound and a soluble complex cyanide.

50557. M. Picalarga. Improvements relating to stone-breaking machines. Comprises a movable jaw and a fixed jaw, the latter being adjustably inclined towards the former wherein the lower part of the movable jaw is carried by an eccentric shaft and the upper part connected by a linkage for moving up and down as well as towards and away from the fixed jaw.

50558. Joseph Dudler. Improvements in or relating to concrete and concrete mixes. (October 27, 1952). Concrete mix consisting of Portland cement and similar cement such as cement fondu, Roman cement, aluminous cement, sand, mineral aggregate and asbestos.

50559. Cognate with application No. 50328, dated October 27, 1953 and 51218, dated February 9, 1954.

50560. British Telecommunications Research Limited. Improvements in or relating to thermionic valve amplifying circuits. (October 31, 1952). Of the dual path type employing two thermionic valves the input and outputs of which are effectively connected in parallel, the feed to the grid of each valve including a non-linear element of

which the impedance becomes high in the event of a short circuit between the grid and cathode of the valve.

50561. A. J. Fippard. Improvements in and relating to friction clutches. (November 25, 1952). Two clutches are arranged within a fluid chamber one or both of said clutches being movable towards the other, and means are provided to isolate the opposite or inner faces of the clutch members from the pressure fluid.

50562. Void.

50563. T. M. M. (Research) Limited. Improvements relating to spindles for textile spinning and like machines. (November 11, 1952). Spindle having at the base of the blade thereof a platform adapted to form a seat for a bobbin and yarn intercepting device associated with the platform.

OCTOBER 28.

50564. The English Electric Company Limited. Improvements in and relating to hydraulic turbines or pumps. (November 11, 1952). Arranging the distributor valve for the pressure fluid within or closely to the guide bearing surrounding the runner shaft, the said valve being operated by a circular cam mounted on the regulating ring for the guide vanes of the turbine.

50565. The Lincoln Electric Company. Improvements in or relating to a process of preparing a flux. Divided out of No. 46914; ante-dated to March 18, 1952. Powdered fluxing ingredients intermixed with a binder passed through a rotary kiln to agglomerate them into particles.

50566. British Insulated Callender's Cables Limited. Improvements in apparatus for lapping flexible members on to an electric conductor of other support. (November 11, 1952). Helically lapping a flexible member by the rotation of a coil of flexible member about the axis of the support, the flexible members passes through a driving members on to the support.

50567. P. Smit. Process for the preparation of macro-molecular products with polar properties from acid sludge and processes for the application of said macro-molecular products. By heating acid sludge till a product is obtained which is insoluble in 2N acid and at least 2/3 of which is soluble in water.

50568. T. Hindmarch. Power transmission mechanisms. (November 3, 1952). Capable of limited slip while transmitting torque incorporated in a clutch or coupling having positively engageable projection members and capable of being operated while in motion.

50569. The General Electric Company Limited. Improvements in or relating to electromagnetic wave-guide systems. (November 4, 1952). Consisting of hybrid junctions and including a first arm dividing symmetrically at the junction into a second and third arm of rectangular waveguide about a plane containing the direction of its longitudinal axis.

50570. Armstrong Patents Co. Limited. Improvements in valves for telescopic hydraulic shock absorbers. (December 5, 1952). Comprising a piston rod having piston mounted thereon and having a valve chamber communicating with the piston, a valve spindle having a valve plate slidable thereon and elastic pressure means to maintain the latter in position.

OCTOBER 29.

50571. Void.

50572. American Flange & Manufacturing Co. Inc. Capseals for container closures. (June 26, 1953). Wherein continuous scores extending downwardly the skirt are filled by portions of gasket secured underneath.

50573. Chambon Limited. Improvements in apparatus for connecting webs of sheet material. (October 30, 1952). The apparatus comprises a loop accumulating device wherein expiring web is fed and means for cutting the overlapping portions of the expiring and fresh webs and for applying a strip of adhesive material at the abutting cut edge portions of the webs.

50574. Council of Scientific and Industrial Research. A magnetic fluid for crack-detection. Suspending in a mineral oil vehicle of density between 0.78 and 0.85 gm/cc a finely ground magnetic material from which non-magnetic materials have been removed.

OCTOBER 30.

50575. Cilag Limited. Process for the production of new disubstituted nicotinic acid amides. Reacting a compound

of the formula $C_6H_5CH_2-NH-AlK-N(R_1)C_6H_5CH_2$

$C_6H_5CH_2$

(R_2) or $C_6H_5CH-N(CO Hal)-AlK-N(R_1)(R_2)$ with nicotinic acid or a derivative thereof.

50576. Cilag Limited. New N-hydroxymethyl ureas and process for producing them. Reacting urea of the formula $H_2N-CO-N=CH-(CH_2OH) \times CH_2OH$ with formaldehyde at a pH above 8 at $20^\circ-50^\circ C$.

50577. Cilag Limited. Process for the production of a new hydroxymethyl amide and the alkyl ethers thereof. Treating isonicotinic acid amide with formaldehyde in neutral or alkaline medium and if desired etherifying the product with alcohols containing not more than 12 carbon atoms.

50578. Socony-Vacuum Oil Company Incorporated. Improvements in and relating to systems for studying phonographically reproducible records of transient waves, such as employed in seismic exploration. Comprising means generating electric signal from record of transient wave, means generating electric signal from timing signal, a monitoring device responsive to first signal and means under control of second signal for initiating display of first signal in the period encompassing production of the marking of the first signal and second signal.

OCTOBER 31.

50579. Void.

50580. Void.

50581. Void.

NOVEMBER 2.

50582. G. Zuelchaur. Pilfer-proof thermoplastic closure and sealable washer ring for bottle and the like container. Deforming the lug formed integrally with a thermoplastic closure when got inserted through hole in sealable ring.

50583. Dr. H. Wilhelmi. Production of multi-layer boards. Binding agents and hardenable materials are mixed with the wooden particles.

50584. Firth-Brown Tools Limited. Improvements in fluted cutting tools. Cutting tool having a rib extending lengthwise along each flute, the portion of the rear face of the flute between the base of the flute and rib is of sharply curved concave form.

50585. Metropolitan-Vickers Electrical Company Limited. Improvements relating to dynamo electric machines. (December 2, 1952). In which rotor conductors are formed with longitudinal ducts for cooling gas with inlet ports in the sides and with discharge passages in the embedded parts of the winding.

50586. S. Izchaki and "NAAN" Kevutzat Hanoar Haoved Lehityashvut Shitufet Be'Eravon Mugbal. Improvements in sprinklers. Comprising a nozzle unit with at least two nozzles, an oscillating lever, a baffle plate at the head end of the lever and a baffle at the tail end of the lever.

50587. Gutehoffnungshutte Oberhausen Aktiengesellschaft. Apparatus for treating iron materials in a liquid state. (Addition to No. 50337). Comprising a nozzle which is mounted in the vessel adjacent the lowest level thereof, for leading the reaction material into the iron-melt.

NOVEMBER 3.

50588. Swami Vimuktananda. Improved petrol gas plant. Carburettor consisting of copper tubes provided with wicks and supplied with petrol and through which air is forced at predetermined pressure.

50589. M. Claeys. Weft drawer for looms working without shuttles. Comprising a body assembled in two parts and having a longitudinal slit with ramps for the reception and confinement of the weft and means for cutting the weft.

50590. Nordmark-Werke G.m.b.H. Process for the production of 4-(p-aminobenzenesulphonamido)-pyrimidines. Reacting benzene sulphonyl halide with 4-aminopyrimidine in the presence of one or more dimethylalkylamines.

50591. Owens-Corning Fiberglas Corporation. Method of and means for coating glass filaments. Filament is allowed to flow through the protruding portion of the molten metal.

50592. Gestetner Limited. Improvements in or relating to paper stack supports for paper feeding arrangements. (December 12, 1952). A vertical pad engages the edge of a paper stack and a member carry the pad on the frame for movement.

50593. Gestetner Limited. Apparatus comprising a sheet-feeding mechanism

and a stack-supporting platform. (January 21, 1953). Means are provided so that the frictional engagement between stack paper and platform is increased.

50594. J. R. Geigy, A.-G. Xanthine derivatives. Reacting 1,3-dialkyl-xanthine or -thioxanthine with an alkane diol or a reactive derivative thereof.

50595. Babcock & Wilcox Limited. Improvements in fluid flow resistors. A housing forming a part of fluid flow line, a removable tubular case fitted within the housing, a plurality of fluid flow resistance elements, means to maintain the case in operative position within the housing and a sealing device.

50596. Imperial Chemical Industries Limited. Improved process for the manufacture of unsaturated dinitriles. (November 28, 1952.) Disubstituted fumaric and maleic dinitriles are prepared by heating a compound of the formula $R_1-CH(CN)-C(CN)-R_2$ wherein

OR₃

R_1 and R_2 represent an alkyl, alkenyl, cycloalkyl or aralkyl radical and R_3 and acyl radical.

50597. National Malleable and Steel Castings Company. Improvements in relating to a draft gear and cushioning therefor. Recesses in followers and in cushioning pads cooperate to maintain aligned relation between them.

50598. Societa Forni Lubatti. A process for reducing powdery or granular oxidised products without a previous agglomeration. The process is carried in a furnace by self resistance electric heating unit.

50599. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to capacitors comprising a ceramic dielectric. The tubule constituting the dielectric are completely metal coated with the exception of the head surfaces.

NOVEMBER 4.

50600. J. H. Addicks. Improvements in and relating to balancing devices for mutually sliding construction parts. The device, consisting of at least one spiral spring adapted to be arranged in the sliding direction connected with a nozzle at one end, the nozzle being coupled in an axially undisplaceable manner by a tube with one end of the spring, and a flat twisted strip passing through a nozzle, is characterised in

that the nozzle is fixedly connected to the tube, the other end of which is rotatably connected with connecting nipple of the spring.

50601. L. & C. Steinmuller G.m.b.H. Steam boiler furnace provided with two independent coal dust firing chambers. Having two independently fired combustion chambers, the chambers being of different sizes.

50602. FOFAG Forsanose-Fabrik H. Schuberth. Method for the preparation of a double salt possessing therapeutic properties. A double salt is prepared from a dibase, a monophenyl ester of succinic acid and a salicylic acid, the product dried, powdered and subsequently wetted with monophenyl ethyl ester of succinic acid and mixed lithium carbonate.

50603. Atomic Energy of Canada Limited. Rotational therapy unit. (December 4, 1952). Void after publication. Rotating radiation source in vertical circle, directing radiation beam towards a point on horizontal axis and moving the source perpendicular to the plane of the vertical circle, they being directed towards the point in each position.

NOVEMBER 6.

50604. Jogendra Mohan Saha and N. S. Jain. Improvements in or relating to the process of defecation or clarification of raw sugar or brown sugar liquor for the manufacture of refined sugar. By heating a solution of raw or brown sugar to 50—100°C, adding milk of lime to a pH 9.5—11.5 filtering and heating to 70—100°C.

50605. F. Wartenberger. Non-spill ink-bottles and the like containers. Consists of a bottle, a funnel shaped member a ring washer and a closure means.

50606. Void.

50607. A. I. Sark. Multi-colour printing. A roller deposits the different colours on another roller which applies it on an engraved roller.

50608. Monsanto Chemical Company. Polystyrene molding compositions. Composing 100 parts of polystyrene, 1—20 parts of copolymer of 50 per cent butadiene and styrene and 0.8 to 1 parts of organic ester of phosphoric acid.

50609. Imperial Chemical Industries Limited. New basic esters. (Novem-

ber 19, 1952). Reacting a thiophosphoric acid halide of the formula $S=P(OR_1)(OR_2)-Y$ with an aminoalcohol of the formula HOLX to produce the ester of the formula $S=P(OR_1)(OR_2)-O-LX$.

50610. National Reasearch Development Corporation. Improvements in or relating to turbo-changed internal combustion engines. (November 11, 1952). [Divided out of No. 49688; antedated to June 5, 1953]. Incorporating means whereby the clearance volume of the cylinder is variable and the effective stroke is less than the effective expansion stroke.

50611. Dr. H. V. D. Horst and Ingenieursbureau Lemet Chromium, H. Van Der Horst N. V. The method of electroplating with iron. The article is electroplated in a solution containing fluoborate, chloride and iron radicles.

NOVEMBER 7.

50612. California Research Corporation. Stabilization of cracked distillate fuel oils. Oil is treated with an acid and then reacted with an alkali.

50613. Cilag Limited. Process for the production of new disubstituted nicotinic acid amides. Reacting nicotinic acid-(1, 2-diphenylethyl)-amide or a N-metal derivative with a reactive ester of an amino alcohol of the formula $HO-Alk-N(R_1, R_2)$.

50614. Stamicarbon N. V. Process for the purification of lactams. Passing the impure lactam in aqueous solution over anion and cation exchangers.

NOVEMBER 9.

50615. K. S. Mahulay and M. C. Mahulay. Improvements in or relating to seed drills. [Addition to No. 47825]. The improvement being that the frame of the chassis is supported on two wheels and the sides of the feed cups are extended below its discharge opening.

50616. Dorr-Oliver Incorporated. Hydraulic classifier. (August 13, 1953). Classifying pool fed with pulp within tank with vibratable bottom; auxiliary hydraulic water fed to bottom of tank at controlled rate, horizontal classification zones formed and maintained in pool; over flow weir for discharge of undersize particles from top zone; underflow discharge passage at bottom

and means for controlling sands discharge and thus the cut between under-size and oversize particles.

50617. Imperial Chemical Industries Limited. New and Improved compositions for use in reutilisable blasting apparatus. (December 5, 1952). Gas producing charge consisting of ammonium nitrate hydrated nitrates of magnesium or aluminium organic fuel.

50618. British Timken Limited. Improvements relating to roller bearings. (January 2, 1953). Circumferential grooves intermediate the ends of two rows of tapered rollers engaged by annular thrust flanges intermediate the ends of each raceway on inner or outer member.

50619. Montecatini, Societa Generale Per L'Industria Mineraria E Chimica. A process for the production of doors from plastic material in a single operation. Temporarily confining the edges of facings, bonding sheets and filling layer and applying to the facings equally distributed pressure so as to effect in one operation compressing of filling layer, bonding together of the facings and bonding sheets and filling layer.

50620. Farmaceutici Italia S.A. Oxytocic and sympatholytic preparations containing salts of the diethylamide of diethylaminoacetic acid. The preparations contain salts of diethylamide of diethylaminoacetic acid with a diluent therefor.

50621. Farmaceutici Italia S. A. Process for preparing the diethylamide of diethylaminoacetic acid. Diethyl amine and chloro-acetyl chloride are reacted together in one operation and the mixture is heated to boiling.

50622. Ciba Limited. Emulsion which is oxidative-drying in the presence of metallic driers and its use. Contains a hardenable formaldehyde condensation product of an amino-triazine having at least 2 NH_2 groups wherein at least two methylol groups per mol of aminotriazine are etherified by alkyl groups.

50623. Henkel & Cie. G.m.b.H., Process for converting phthalic acid into terephthalic acid. Heating potassium salt of phthalic acid to a temperature above 340°C . and not exceeding 500°C .

50624. British Telecommunications Research Limited. Improvements in and relating to impedance matching. (November 26, 1952). Impedance

matching between a source of signal and a load is effected by means of an impedance transformer consisting of an inner conductor and an outer conductor spaced by insulating members and means for varying the dielectric constant of said insulators.

50625. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of sulfur containing pyridones. Condensing α α -dihydrocarbyl-acetacetonitrile with a formic acid ester, treating with ammonia, cyclizing and treating the cyclized product with H_2S .

50626. Shree Krishna Ltd. Improvements in or relating to buckets and like containers. The bucket is characterised by a depression formed in its base, the depression bulging towards the inside of the container.

NOVEMBER 10.

50627. Dunlop Rubber Company Limited. Resinous nitrile reaction products and their method of preparation. (November 13, 1952). Polyhydric phenol and a lower aliphatic ketone are reacted with a polymer or copolymer containing nitrile groups.

50628. Imperial Chemical Industries Limited. New vat dyestuffs. (November 24, 1952). Void after publication. Heating 6-amino-3':4'-phthaloylacridone with 2-p-halogenoarylamino anthraquinone or a 2-p-halogenoaryl-anthraquinone-oxazole.

50629. Imperial Chemical Industries Limited. Improvements in or relating to a method for insolubilising artificial filaments, threads, fibres and the like obtained by the spinning of solutions of proteins. Impregnating filaments with an acidified solution of formaldehyde, drying the treated filament at 100°C and then heating at 130°C .

50630. David Harcourt Limited. Fluid pressure gauges. The gauge is of Bourdon-tube type and the end of Bourdon tube has attached to it a coupling tube.

50631. Les Usines De Melle. Improvements in process for the production of extra-neutral alcohol. [Addition to No. 39771]. Contacting alcohol with water in the top decanting zone of purifier causing the liquid to separate into two layers and distilling the vapours from the top of the purifier in an auxiliary column.

50632. The English Electric Company Limited. Improvements relating to mine installations. (November 10, 1952). Means responsive to cage reaching landing position for automatically initiating operation of loading means, and restriction means for preventing initiation of a further wind until predetermined number of conveyances have been pushed into cage.

50633. Ecrofnier and Partners Limited. Improvements in moulding cores. (November 26, 1952). Top, bottom and side members linked with a rod which can be moved axially for effecting and collapsing the core.

50634. International General Electric Company of New York Limited. Improvements in or relating to method and apparatus for forming and mounting a shield on the mount of electric lamps or similar devices. Shaping a sheet metal blank in the form of a shield, assembling the shield so formed with lamp mount by aligning the shield axially with the filament and the corrugation aligned with the lead wire.

50635. Titan Eisenwarenfabrik Gesellschaft mit beschränkter Haftung. Improvements in or relating to banding packages. Cutting pairs of slots disposed substantially in the longitudinal direction of the banding strip and pressing the thus formed strap out of the plane of the band.

NOVEMBER 11.

50636. Director, Indian Institute of Science, Bangalore. Improvements in or relating to current meters for measurement of stream velocities or the like. Propeller driven direct current generator in a streamlined body generates electrical voltages proportional to the stream velocity.

50637. Allmänna Svenska Elektriska Aktiebolaget. Compensation means in three-phase arc furnaces. Consisting of a furnace transformer, a furnace having a middle electrode and two outer electrodes, three feeders and reactance means for suppressing unsymmetries in the load.

50638. Dorr-Oliver Incorporated. Hydraulic classifying apparatus. Pulp mixture fed to classifier pool in a receptacle bottom of which oscillated about vertical axis and to which hydraulic auxiliary water is introduced jet wise at controlled rates; solids in mixture

separate into undersize and oversize fractions former overflowing from top of pool and latter through a passage and over a submerged weir to receiving chamber; adjustment super elevation or difference of levels in pool and coarse fraction chamber controls relative sizes of fractions and cut at which separation is effected.

50639. Fairwest (U.K.) Limited. Improvements in or relating to circular looms. [Divided out of No. 47543; antedated to June 27, 1952]. Providing an auxiliary cam the contour and speed of which is such that the shuttles remain uncovered for a predetermined angle of their movement about the axis of the loom.

NOVEMBER 13.

50640. M. Dunlop. Improvements in or relating to oil circuit breakers. Of the double-break type in which one fixed contact of each phase is fitted with an arc extinguishing device comprising a pressure chamber of insulating material.

50641. Russell Constructions Limited. Improvements in or relating to sieves and the like. Comprising a rim, a septum stretched over the rim, a central discharge device, a septum of the lower unit having a central opening.

50642. S. & R. J. Everett & Company Limited. Improvements relating to the attachment of needles to hypodermic syringes. Tapered nozzle of a syringe is formed with ribs and a needle is fixed in a mount having a bore to fit the nozzle and provided with a springy detent.

50643. Ed. Geistlich Sohne A. G. Fur Chemische Industrie. Improvements in or relating to preparation of intestinal disinfectants. Sulphanilamido derivative of a divalent carboxylic acid is reacted with 8-hydroxyquinoline.

50644. T. Zan. Improvements in or relating to shakers of the type used in rice mills. A plank of wood is suspended across the perforated sheet provided in the shakers.

NOVEMBER 14.

50645. Societe D'Etudes, De Recherches Et D'Applications Mecaniques. Ignition device constituted by flat metal box at the front end of rocket motor rear part of the box bearing on front face of block of propelling charge and having apertures of flash holes.

NOVEMBER 16.

50646. J. E. Collet & Fils. Improvements in and relating to fluid dispensing apparatus. The apparatus comprises a container having an orifice, a closure for the orifice and a distributing element in communication with the interior of the container, the distributing element and the closure element having interengageable means to temporarily couple them.
50647. Stamicarbon N. V. Process of purifying lactams. A solution of the contaminated lactam in an inert organic solvent is oxidised and the impurities are removed.
50648. Dunlop Rubber Company Limited. Bonding of resin compositions to surfaces, (November 25, 1952). Bonding a composition comprising a halogenated resin such a polyvinyl chloride to a surface such as metal and wood.
50649. J. R. Geigy A.-G. Fluorescent monotriazole compounds and process for the production thereof. Coupling diazotised 4-aminostilbene-2-sulphonic acids with aminoaphthalene compounds and oxidising 1,2,3-triazolyl compound thus produced.
50650. Imperial Chemical Industries Limited. Improved method of firing explosive charges. (November 28, 1952). Passing electric firing current through fuse-head of each succeeding detonator by way of an electrically actuatable delay switch which is actuated by electric firing current of the preceding detonator and which only permits the electric firing current to pass through the fuse-head when a closed circuit is formed.
50651. Imperial Chemical Industries Limited. Improvements in and relating to the preservation of natural and synthetic rubber and rubber articles. (December 3, 1952). Incorporating an α β -bis- (2-hydroxy-5-methylphenyl) ethane in which there is in 3-position of each of the two phenyl radicals an alkyl, cycloalkyl or alkylcycloalkyl group containing less than 8 carbon atoms.
50652. S. Suzuki. An improvement of the automatic card stripper. Comprising stripping means mounted for transverse movement parallel to the axes of the cylinder and doffer, the stripping means including an opening through which suction is effected.

NOVEMBER 17.

50653. Ricardo & Co., Engineers (1927) Limited. Improvements in or relating to fuel injection nozzles. End of the nozzle casing and the pintle are provided with an asymmetrical formation.
50654. The General Electric Company Limited. Improvements in or relating to the manufacture of electrical devices such as T-R cells, voltages breakdown devices and filament devices, having gas-filled sealed envelope. (November 24, 1952). Envelope in the form of alternate glass and metal parts loosely assembled within an enclosure, the enclosure is filled with gas at required pressure, each metal part is then heated by eddy current to seal the glass thereto, the said required pressure of gas being such that the gas trapped within the envelope by the sealing constitutes a filling at required pressure when the envelope has cooled.
50655. Marshall's Tea Machinery Company Limited. Improvements in operating mechanisms for sliding doors. (November 20, 1952). Comprises a linkage pivotally connected at one point to the door and at another point to an axis fixed relative to the door frame and actuating means for moving said linkage for causing the door to slide.
50656. Merck & Co., Inc. Morphine derivatives compounds and process of preparing the same. By reacting normorphine or dihydronormorphine with aliphatic halide.
50657. Microcell Limited. Improvements in or relating to containers having clamping means for their lids. Comprising an element rotatable on the one part about an axis extending the direction of the clamping movement, a shoulder on the other part having its face directed towards abutment.
50658. Chemical Construction Corporation. Improvements in or relating to method of separating ammonium carbamate from crude urea containing the same. (October 2, 1953). Intimately contacting crude urea with a hot aqueous solution urea in a vapor-liquid contact zone.
50659. Murphy Radio Limited. Improvements in and relating to noise suppression in radio receivers. (November 25, 1952). Having in series with its audio-signal-channel a diode and in shunt with its signal channel another diode.

50660. A. Grassmuck. Improvements in or relating to clutch means, more especially for motor vehicles and the like. (May 21, 1953). Clutch parts arranged in two parts housing which is connected with the driving means and rotatably mounted on the driven part of the clutch device.
50661. J. H. J. Janssen. A filing binder. A top panel and a bottom panel interconnected by a back, a number of paper retaining hooks provided with a clamping device and having a number of slots in the top panel.
50662. Ciba Limited. Process for obtaining a highly active mineral-corticoid. Disintegrated, superarenal glands are treated with oxygen and the corticoid which affects the mineral metabolism is isolated from them.
50668. H. W. Burrington. Improvements in or relating to binding for loose leaves. The binding has two fly leaf shutters connected by a back constituted by a support carrying the claws and actuating mechanism.
50669. Carlo Erba S.p.A. Process for the preparation of 2-4-diamino-pyrimidine derivatives. [Addition to No. 49617.] Reacting a 5-keto nitrile of the formula



$R'-CH'CN$ with an amine $R'''-NH_2$ wherein R' , R'' , R''' are H or aliphatic, aromatic or alicyclic radicals, and condensing the product with guanidine in presence of alkalis, besides the amount of alkali generally present in guanidine.

NOVEMBER 18.

50663. Void.
50664. The Indian Oxygen and Acetylene Company Limited. Improvements in or relating to the flame cutting of metals and alloys. (January 14, 1953). Flame cutting metals and alloys by means of an oxygen jet wherein an oxidisable adjuvant material in powder form is fed to cutting zone by means of a combustible carrier gas.
50665. L. Smalley. Improvements in mountings for doors of garages, lock-up shops, warehouses, stores or the like. (December 30, 1952). Two rolling support members are connected to the door during the opening of which it rolls inward from the door frame along track members, means being provided to prevent the rolling support from slipping on the track.
50666. Colcrete Limited. Improvements in or relating to pumping apparatus for liquid materials capable of setting. (November 21, 1952). Downwardly directed Mono pump with feed tank located above and connected to pump stator; driving shaft extends upwardly from pump rotor through the tank.
50667. L. Fuller and E. W. Sudlow. Improvements in or relating to electrical secondary batteries. (November 28, 1952). Of the kind in which the positive and negative electrodes are constituted by grids, made of lead or lead alloy and filled with paste which is the active material the plates being separated by porous sheets.
50670. Tannoy Limited. Improvements relating to loudspeakers. (November 19, 1952). Mouth of the horn divided into sections each with its own throat extending to the energy source and the throats so designed that relative path lengths of sound reaching the mouth are such as to produce a phase and amplitude relationship between the various sections giving directional characteristic.
50671. L. R. F. Harris. Improvements in or relating to time-division multiplex communication systems. (November 19, 1952). Including three or more time-division multiplex both ways transmission means, each of which is connected to at least to two of the remaining means by pulse gates.
50672. Farbwerke Hoechst Aktiengesellschaft vormal's Meister Lucius & Bruning Manufacture of penicillin salts of N-phenyl-urethanes. (February 6, 1953). Reacting N-phenyl-urethanes or salts thereof with penicillin or the salts thereof.

NOVEMBER 19.

50673. Void.
50674. Void.
50675. Metropolitan-Vickers Electrical Company Limited. Improvements relating to machines having induction motor drives. (November 20, 1952). At least one induction machine being fed with alternating current to drive the equipment and means being provided for applying D.C. current to at least another induction machine to effect a braking action on the equipment.

NOVEMBER 20.

50676. Godrej & Boyce Manufacturing Company Limited. Improvements in or relating to double-control single-key-hole locks for safe deposit lockers or the like. [Addition to No. 44059]. Locking device comprises a pivoted lever which is biased by means of a spring and the tip of which rests in the step of a stepped abutment on the bolt.

50677. R. N. Kentish. Hand tools. (November 21, 1952). Comprising a handle having detachably supported thereon for angular displacement a work engaging head, and ratchet and pawl means providing a driving connection between the handle and the said head.

50678. International Combustion (Holdings) Limited. Improvements in or relating to apparatus for feeding fuel to furnace grates. (November 21, 1952). Comprising a feed tube, means for feeding fuel to the tube, a device for imparting motion to air or gaseous mixture, means for separating some or all of the air or gaseous mixture from the fuel before its entry into active combustion zone of the furnace.

50679. R. D. Boyce and Romac Industries Limited. Improvements in or relating to patches for rubber articles. (November 21, 1952). Repair patch comprises a foundation member of cured rubber having airtight protective layer on one side and a layer of uncured adhesives compound on the other side, with a rim projecting beyond the margin of the foundation member, and a foil protecting the adhesive layer, wherein the foundation member has a projecting rim of cured rubber coextensive with the adhesive rim.

NOVEMBER 21.

50680. National Moulding Co. Ltd. Improvements in or relating to toys. Having a body with a spring operated driving shaft wherein one end of the front axle is adapted to engage one out of three adjustment slots provided in the body thereof.

50681. Cognate with the application No. 50822. Dated December 11, 1953.

50682. Societe d'Applications Generales d'Electricite & de Mecanique. Improvements in and relating to beating-up wheels for circular looms. A beating-up wheel peripherally armed with driv-

ing and beating-up pallets in the form of a thin curved blade.

50683. Henkel & Cie. G.m.b.H. Process for the manufacture of salts of aromatic dicarboxylic acids, especially of terephthalic acids. Heating potassium salt of aromatic monocarboxylic acid in presence of carbon dioxide.

50684. Void.

50685. N. V. De Bataafsche Petroleum Maatschappij. Improved process and system for the circulation of fluidized solids. Solids are made to flow through conduit means in a curved path and its flow is regulated.

50686. Void.

NOVEMBER 23.

50687. Void.

50688. Imperial Chemical Industries Limited. Improvements in or relating to blasting devices. (January 14, 1953). Bursting disc separating charge container and venting cap consists of rigid synthetic resin composition.

50689. The General Electric Company Limited. Improvements in and relating to electric pulse generators. (December 3, 1952). Comprising a frequency divider, a source regular operating pulses, the former comprising an electron discharge valve with a feedback circuit between its anode and control grid responsive to an operating pulse from said source, and a phase control circuit connected to the frequency divider.

50690. The General Electric Company Limited. Improvements in and relating to automatic telephone exchanges. (December 3, 1952). Electronic exchange employing multiplex switching units through which all switching of speech paths are effected, not more than two such units need ever be connected in tandem to establish a speech path from one subscriber to another and the number of such units employed for reasonable service for large number of subscribers are relatively small.

50691. Stamicarbon N. V. Apparatus for stabilizing the heat input by a fuel gas of changing calorific value and density. The fuel gas is heated in a dummy oven and the output of the oven automatically controls the supply of the gas to the installations.

50692. American Cyanamid Company. Improvements relating to the production of chlorotetracycline. [Addition to No.

41041.] The nutrient medium comprises 13 to 80 gms. of starch, 10 to 40 gms. of an organic nitrogen source, and a mixture of non-toxic compounds and 5 to 30 gms. of a glyceride oil.

50693. The Wellcome Foundation Limited. Improvements in amino compounds of therapeutic value. Converting compounds of the formula $Z-C_6H_4-O-(CH_2)_n-O-C_6H_4-Z$ into compounds of the formula $RHN-C_6H_4-O-(CH_2)_n-O-C_6H_4-NHR$ by methods known *per se* whereby the group Z is converted into the secondary amino group-NHR.

50694. The British Thomson-Houston Company Limited. Improvements in and relating to mechanical rectifiers. (December 23, 1952). The contact member being actuated by a push rod comprising a metal rod connected to and insulated from a reciprocable driving member, axially aligned therewith.

50695. J. Martin. Improvements in or relating to ejection seats for air craft. (March 4, 1953). Normally slack leg restraining means pulled taut about the leg when the seat is ejected.

50696. The Glacier Metal Company Limited. Improvements in or relating to centrifugal filters. (November 25, 1952). Having an extended passage of spiral formation through which the liquid to be filtered is constrained to flow.

50697. Carbodies Limited. Means for operating a drop-head of a motor-car body. (January 24, 1953.) Valve means opens when the control is not actuated preventing hydraulic locking of the piston and cylinder.

50698. The Clyde Rubber Works Company Limited. Pad for use with flat bottomed rails. [Addition to No. 48173]. A slab or resilient material having parallel upper and lower faces each formed with parallel grooves with side of grooves converging towards roots which are parallel to the faces.

50699. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of morphinan derivatives. Reacting 3-hydroxy-N-methyl-morphinan in a Mannich reaction with formaldehyde and a secondary amine, and catalytically hydrogenating the product formed.

50700. Void.

50701. Ciba Limited. Process for the partial removal of oxo groups from steroids. α -dioxo compounds of the steroid series, or their enols or enolates

are heated with hydrazine or a derivative thereof in the presence of a basic alkali compound at a temperature not exceeding 160°C.

NOVEMBER 24.

50702. Void.

50703. Imperial Chemical Industries Limited. New pigment compositions and their use in colouring rubber and other polymeric substances. (December 3, 1952). Pigment compositions comprise a pigment, a polyvinyl methyl ether and a water insoluble substance.

50704. Imperial Chemical Industries Limited. Improvements in or relating to blasting devices. (January 23, 1953). A throat member which is held against the bursting disc by the venting cap, is included in the charge.

50705. The English Electric Company Limited. Improvements relating to alternating current electric generating plant. (December 3, 1952). Comprising in combination a prime mover, a synchronous dynamo electric machine coupled thereto and started as an induction motor supplied from the a.c. system and synchronised with the a.c. system.

50706. The British Rayon Research Association. Improvements in or relating to bobbin-stripping machines. (December 8, 1952). Comprising a bobbin support, a restricted passage, a nozzle capable of directing a jet to blow the end of the yarn towards the passage and means for creating vacuum.

50707. Nepera Chemical Co. Inc. Therapeutic compound and process for making. By reacting a quaternary ammonium hydroxide with a dialkylxanthine or an 8-substituted derivative thereof.

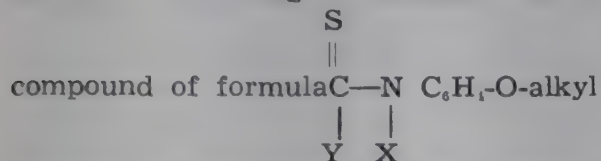
50708. Technicolor Motion Picture Corporation. Method and apparatus for the photoelectric modulation of an electric signal train by means of a motion picture film that records the colour aspects of an original. Signal modulation is controlled with motion picture film, by exposing an original latent record of the colour aspects of the original developing the latent record, by modulating a scanning light beam with the modulation record and by controlling with the modulated scanning beam photo-sensitive impedance means.

50709. A. Gardella and C. Gardella. Improvements in frictionally controlled attenuation, high speed spinning frames

for coarse fibres. Comprising in combination a sliver drawing unit, sliver control means, a centrifugal spinning can, and a friction thread—controlling member.

50710. Ciba Limited. Process for the manufacture of butyl p-allyloxy-thionocarbanilate. Reacting p-allyloxy-phenylisothiocyanate with butyl alcohol.

50711. Ciba Limited. Process for the manufacture of di-(p-substituted phenyl)-thioureas. Reacting an aniline with a



wherein X is hydrogen and Y is halogen, amino, substituted hydroxyl or thio group.

NOVEMBER 25.

50712. Void.

50713. American-Home Products Corporation. Improvements in or relating to stabilized aqueous hyaluronidase solutions. (June 9, 1953.) Comprising hyaluronidase, ethylenediamine-tetraacetic acid and a salt consisting of sodium chloride or calcium chloride.

50714. American Cyanamid Company. Improvements in or relating to modified aminoplastic resin and the production thereof. (August 31, 1953.) The resin composition comprises melamine-formaldehyde, urea-formaldehyde or melamine-urea-formaldehyde and a triazine having at least one but not three aldehyde reactive aminogroups or the reaction product of the triazine with an aldehyde.

50715. Chemical Construction Corporation. Improvements in or relating to method of removing ammonia from urea synthesis melt. (October 2, 1953.) Treating the melt with additional hot liquid ammonia in an amount of 50 per cent to 150 per cent by weight of the ammonia content of the melt and recovering the refined urea.

50716. Void.

50717. Void.

NOVEMBER 26.

50718. Void.

50719. Void.

50720. Void.

50721. W. Bergmann. Concrete forms for the construction of ceilings walls or the like of concrete. Wherein the channels between the joists are open at one side and the transverse connecting elements are flush with outer surface of the joists such that upon placing the gratings, the joists of one engage the channels of the other.

50722. R. Soderberg and Co., Aktiebolag. Improvements in releasing apparatus for child birth. Mouth of a suction cup having a draw grip is provided with a perforated strainer like cover.

50723. S. Stokland. Seed planting machines. Seed container is provided with one outlet connected with the upper end of a vertically disposed passage and at the lower end connected to a member of circularly disposed compartments which are connected to separate drill forming units.

NOVEMBER 27.

50724. W. Cookson. Improvements in or relating to roofing sheets and roofing assembly of such sheets. (December 16, 1952.) Stiff sheet formed at one edge portion with U shaped male rib locking member having remote from edge an external locking ledge providing internal groove into which hook portion of purlin bracket is engaged.

NOVEMBER 28.

50725. Hoover Limited. Improvements relating to squeeze driers. (December 1, 1952.) Comprising flexible impervious bag for clothes, cover with pervious inner and impervious outer lids and means to collapse bag with suction through cover space to remove liquid.

50726. Hoover Limited. Improvements relating to washing machines. (December 1, 1952.) Having washing liquid container, impeller therein and suction squeeze drier characterised in that same motor drives the impeller and suction pump permanently connected together.

50727. Wingfoot Corporation. Improvements in brake with mild steel return spring. A movable block and a return spring for the block having low resistance to permanent set and capable of assuming a plurality of progressively shorter lengths as it is stressed beyond yield point.

NOVEMBER 30.

50728. Void.

50729. United States Steel Corporation. Electrolytic pickling apparatus. The apparatus consists of two electrolytic tanks having a pair of electrodes between which the strip passes.

50730. Imperial Chemical Industries Limited. New colour photographic process and colour photographs obtained therewith. (December 10, 1952.) Developing with a primary aromatic amine in the presence of 2-carbalkoxy-indazole-5-sulphonamide (colour coupler).

50731. Imperial Chemical Industries Limited. Safety heating elements for initiating non-detonating thermal decomposition of blasting charges. (January 14, 1953.) Safety heating device for initiating a blasting charge consists of a container enclosing a mixture of guanidine nitrate, potassium persulphate and cuprous chloride.

50732. M. N. Patel, and E. R. Bhide. Improved top opening device for a plastic container. A box-top-disc having a one piece window with borders wedged on either side of its diameter punched deep enough to leave a thin film that would keep the contents hermitically sealed.

50733. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of producing alphabeta unsaturated acid halides of the vitamin A series. Hydroxy-acids of the vitamin A series are treated with halogenating agents.

50734. C.U.R.A. Patents Limited. Production of carbonised agglomerates and means therefor. (December 1, 1952.) Carbonisable material are subjected to an elevated temperature at which they become adhesive and thereafter subjected to an oscillatory motion.

50735. Latham Abercrombie & Co. Ltd. Improvements in or relating to duplicating machines. [Addition to No. 49560.] The structure on which means are provided for duplicating, consists of a detachable unit which can be securely positioned in the box like container.

50736. Smitsvonk N. V. Packing for internal combustion engines operating as a surface discharge spark plug. One or more conducting layers in heat resisting insulating material placed between two metal layers with which the

conducting layers form surface discharge spark plug and between which sprays jump over insulating material.

DECEMBER 1.

50737. The Firestone Tire & Rubber Company. Improvements in or relating to tire tread. Plurality of parallel circumferential extending zig zag ribs arranged in odd number of pairs defining grooves there between.

50738. Siemens Brothers & Co. Limited. Improvements relating to automatic telephone exchange selecting arrangements employing uniselectors. (December 29, 1952.) Impulse counting chain of electronic devices is set up to register the value of the digit before the selective movement of the unselector takes place.

50739. F. Limb. Improvements in and relating to rotary chamber mills. (December 11, 1952.) Rotary mill driven simultaneously about two axis of rotation, which cross within the chamber.

50740. The English Electric Company Limited. Improvements relating to axle-hung electric traction motor drives. (December 15, 1952.) The motor is arranged for limited transverse movement relative to the bogie or undercarriage which movement is restrained by resilient means.

50741. Wurttembergische Spindelfabrik G.m.b.H. Retaining means for drafting rollers. Each roller comprises an outer or cover sleeve and means for removing the said cover sleeve.

50742. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to devices comprising a magnet core of ferromagnetic ferrite material and at least one layer of glass, enamel or a different ceramic material provided on at least part of the surface of the core. Comprising magnet core of ferromagnetic ferrite material, at least part of its surface being provided with at least one layer of glass, enamel or other ceramic material having a specific resistance of more than 10 ohm./cm.

50743. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of producing primary alcohols from the vitamin A-series. Primary alcohol of the vitamin A-series such as β -ionylidene ethanol, is prepared by converting the corresponding acid halide by known methods into the alcohol.

50744. N. V. Philip's Gloeilampenfabrieken. Improvements in or relating to the production of vitamin A. Condensing beta ionone with monohalogen acetic ester, converting the ester, into acid halide and converting the halide into alcohol and then to C_{11} ketone and converting the ketone with the ester into vitamin A-halide.

50745. Foundry Equipment Limited. Foundry moulding machines. Comprising in combination a hydraulic squeeze moulding machine, an electrically driven vibrator, a pump unit, and an operative connection from resiliently mounted platen to switch means.

50746. Void.

50747. Pest Control Limited. Novel Emulsifying agent compositions and their use. (December 18, 1952). Comprising a polyethenoxy and equal amount of Ca, Mg, or Zn salt of sulpho succinic diester emulsifying agents in common organic solvent.

50748. Gussstahlwerk Witten Aktiengesellschaft. Method of and device for performing cut-off operations. The feed motion is made by pivoting the work-piece relative to the rotary cutting tool about an axis lying parallel to the tool axis and at the point of first contact between the tool and work-piece.

50749. K. G. Date. Cigarette delivering apparatus. Dividing by compartments to hold one or more removable boxes for containing one or more brands of cigarettes.

DECEMBER 2.

50750. G. Kromschroder Aktiengesellschaft. Pipe line adaptor piece for measuring and regulating devices, pipe line apparatus or the like. (December 2, 1952.) Provided internally with two co-axial conduits for the passage of the flowing fluid, both the conduits being adapted to be connected at one end to the control or measuring device at the opposite end the conduits issue into one of two separate conduits for connection to the pipe line.

50751. Industrial Trustee Holding Company. A rail having several ribs. Rail formed by hollow body obtained by deforming a tube to produce ribs.

50752. D. Napier and Son Limited. Treatment of metal articles to increase fatigue strength. (December 3, 1952.) High frequency mechanical vibrations are

created between the surface of the article and a fluid in contact with the surface.

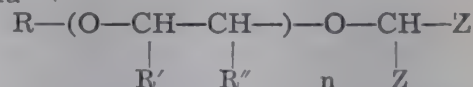
50753. Aerocem Limited. Improvements in or relating to cladding compositions adapted for mechanical application and method of cladding surfaces therewith. (December 3, 1952.) Aerated mixture of a solid aggregate, a non-cementitious binding medium, water and a stable foaming agent.

50754. Siemens Brothers & Co. Limited. Improvements relating to automatic telephone systems. (December 29, 1952.) Provided with an access which transverse the outlets and test them to ascertain if the selecting switches are off-normal.

50755. Void.

50756. N. V. Lemet Industrie. Improvements in and relating to frameworks for a tent or like structure. Comprises a central column with a hub and spokes at upper end, a rim connecting the spokes and having supporting posts.

50757. Ciba Limited. Process for the manufacture of new polyglycol ethers. Reacting a compound of the general formula



with an amine, R, R' and R'' representing hydrogen or hydrocarbon radicals.

DECEMBER 3.

50758. Council of Scientific and Industrial Research. A process for the preparation of modified alkyd resins. Polybasic acids or their anhydrides, polyhydric alcohols and fatty acids of petrol ether extracted Kamala oil are heated in an inert atmosphere upto a temperature of 230—250°C.

50759. Rector of the Loyola College. Process for the production of para- and meta- cymenes. Treating carene with iodine, bromine, chloro-acetic acids, oxalic acid, maleic anhydride, phosphorous pentoxide or oxide of chromium.

50760. Void.

50761. Ram Yadav. Improvements in or relating to alloys for thermoelectric applications. Comprising zinc, antimony and small percentage of highly conducting metal such as silver.

50762. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric incandescent lamps of the kind

DECEMBER 4.

- comprising at least one main filament and one dimming filament, the latter being arranged over a screen. The end of the dimming filament is passed beyond the edge of the screen.
50763. Seetru Limited (formerly known as Seetru Products Limited). Improvements in fluid valves and sealing means. (March 14, 1953.) Plunger type two way hydraulic valves having at least three hydrostatic sealing rings of rubber, a casing having a valve chamber, a valve plug carrying the rings.
50764. General Railway Signal Company. Improvements relating to electromagnetic relays. Consisting of two cores with a cooperating armature pivoted between one pair of ends of a pair of cores, a core block connecting the other pair of ends of the cores a permanent magnet and a winding on at least one of the cores.
50765. N. Narayana and V. K. Leley. An improved process for the manufacture of soaps. (Date claimed under Section 13(2), 3rd November 1950.) Reacting an oil or fat with a weak base like oxide or hydroxide of alkali or alkaline earth metal in presence of catalytic agent like glycerine and/or anhydrous soap.
50766. Svenska Rotor Maskiner Aktiebolag. Improvements in or relating to regenerative heat exchangers. A rotor surrounded by two bearing members coaxial with the rotor components.
50767. Alweg-Forschung G.m.b.H. Improvement in railway-tracks. Centre of gravity or another predetermined point of vehicle guided in space along continuously extending curve; course of super elevation of track follows self-producing, preferably sine law; supporting structure laterally deviated correspondingly to guide predetermined point along the continuous regular curve.
50768. Alwer-Forschung G.m.b.H. Shunting system for track-bound vehicles. Flat solid area forming trackless shunting yard, branch tracts connected to main lines and transportable track sections movable over yard and adapted to transport or to unloading or loading zone and *vice versa*.
50769. International Business Machines Corporation. Magnetic data storage system. (May 4, 1953.) Provided with means for selectively selecting a single address for storage controlled by indicating means.
50770. K. V. Karantha. Cold water vessel. A cold water vessel with semi-porous walls, has corrugations in the walls for increasing the extent of cooling surface.
50771. K. V. Datye and Dr. V. B. Chipalkatti. A process for the stabilisation of textile or like materials. Causing the cellulose to react with formaldehyde in the presence of a hygroscopic or hydrophylic substance.
50772. Void.
50773. T. Hindmarch. Improvements in or relating to resilient couplings. (March 18, 1953.) Resilient units deformable in circumferential direction disposed in circumferentially registrable elongated slots in relatively rotational members; each unit has resilient means acting upon the discs through two abutment members.
50774. Westinghouse Brake & Signal Company Limited. Improvements relating to exhausters of the kind employed in vacuum braking systems. (December 12, 1952.) Flow of gas between crank case and suction pipe or chamber of exhauster controlled by valve limiting vacuum in crank case to predetermined maximum, less than vacuum set up by lubricating oil pump.
50775. CELULOMEX, S. A. Process of producing cellulose from plant material of any kind. Boiling the raw material with an aqueous solution of carbonates of alkali and alkaline earth metals an alkali phosphate and an ionisable salt of alkali and alkaline earth metals and separating the cellulose fibres.
50776. S. M. Shamsie. Improvements in or relating to cocks. [Addition to No. 44626]. Wherein the operating rod for the spring loaded valve rod carries an operating lug and its rotational movement is limited by two pins.
50777. P. M. G. De Terramala. Improvements in friction clutches. (December 5, 1952.) One shaft is connected to two co-rotating members and the other shaft is connected to a third member the engagement or disengagement is effected between two co-rotating members and the third member.
50778. The British Thomson-Houston Company Limited. Improvements in and relating to oil seals. (December

10, 1952.) Annular passage formed around the shaft with one or more drainage point the furthest drainage from bearing portions being connected to an extraction pumps.

DECEMBER 5.

50779. The Permutit Company Limited. Improvements relating to the control of the mixing of liquids. (December 9, 1952.) Ratio between conductivity of effluent water from hydrogen-ion-exchange material and that of blended water is maintained constant by means of electrical system.

50780. T. S. Lian. Improvements in and relating to the preparation of colloidal, organic solutions from sea-weeds and their dried final products, and to the products obtained therewith. Extracting sea weeds with at a temperature not above 40°C.

DECEMBER 7.

50781. Void.

50782. Council of Scientific and Industrial Research. Improvements in or relating to tanning liquors. Comprises reducing a bichromate with a metal like aluminium or iron presence of an acid such as sulphuric or hydrochloric acid.

50783. Void.

50784. Dot Pens Limited. Improvements in or relating to ball point pens. Comprising a barrel having a ball point mechanism, an operating mechanism for operating the ball point and a self locking device for the said operating mechanism.

50785. Chas. Pfizer & Co. Inc. Improvements in or relating to steroids. Process for 11- β -hydroxylation of a steroid compound comprises contacting the steroid with the oxygenating activity of an organism chosen from the genus *curvularia*.

50786. Anstalt für die Entwicklung von Erfindungen und Gewerblichen Anwendungen ENERGIA. Hollow charge projectile. Fire transmission means to transmit the fire from the percussion fuse to detonator comprises a tubular body containing an explosive transmission column at the front end of which the fuse is fixed as a projection.

50787. The Avery Company Limited. Improvements in and relating to weighing apparatus. Wherein a further nib

associated with slide movable on blade having scales on either sides is provided to ensure accurate engagement of main nib.

50788. Adrema Limited. Improvements in sheet feeding means for addressing and like series printing machines. A conveyor for carrying the sheets a gate to obstruct and allow the sheets to pass and means to actuate the gate.

50789. A. P. Smith, G. Fletcher and Drake and Fletcher Limited. Improvements in and relating to containers for insecticide and like spraying equipment. (December 5, 1952.) [Divided out of No. 50038, ante-dated to August 6, 1953]. Wherein supporting means are provided in the container to prevent crumpling of the flexible bag.

50790. Huwood Components Limited. Improvements in water infuser apparatus for use in laying dust in coal mines and like workings. Providing a valve for controlling flow of water from the cylinder to tube, the valve being closed prior to admitting water to cylinder to effect sealing.

50791. R. E. L. Warburton and W. H. Sandford. Improvements in or relating to devices for securing ropes, cables and the like. Wherein idle rope leg is supported in V-groove and working leg against sliding bearing surface (socket) of free member against anchored member (wedge).

50792. R. E. L. Warburton and W. H. Sandford. Improvements in or relating to coupling devices for securing ropes, cables and the like. Having interposed between the bearing surfaces of free and anchored members a smooth bearing metal strip.

50793. S. M. Shamsie. Improvements in or relating to bib cocks. Comprising a tubular body, a valve spindle axially passing there through and having a valve disc at the end which is adapted to work in co-operation with the disc at the lower end of the tubular body.

DECEMBER 8.

50794. R. Krueger. Spinning process and spinning machine for long fibres Using two drafts in the same working process with simultaneous twisting.

50795. Ontario Research Foundation. Method of forming metal articles. Comprising grinding material to fine particle size, reducing the material to form

- mass of metal particles at less than melting temperature, supporting the metal particles in shaping structure, heating to cause coherence of all particles to form a metal body.
50796. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to the production of quaternary ammonium salts of di- and tri-(dialkylaminoalkoxy, benzene). (November 4, 1953.) Reacting β -halogeno-alkoxy benzene with a tertiary alkylamine.
50797. Titan Company, Inc. A new or improved process for the production of refractory metals. [Addition to No. 48211]. Confining the refractory metal halide to the immediate vicinity of a cathodic surface of a perforated metal cathode by directing the refractory metal halide into the perforated metal cathode while concurrently passing electric current through the cell.
50798. Dr. H. Schrader and Dr. D. J. Ram. Process to produce high grade low phosphorous ferro-manganese. Manganese ore initially is reduced to convert iron oxide to metallic iron and to convert higher oxides of manganese into manganous oxide, the reduced ore is then crushed and mixed with washed coking coal fires, and the mixture subjected to carbonisation to obtain mangano-coke which is smelted in a low shaft furnace to get ferro-manganese.
50799. British Telecommunications Research Limited. Improvements in or relating to electrical signalling systems. (July 25, 1951.) [Divided out of No. 47755, ante-dated to July 24, 1952.] Including high speed register of the magnetic drum type, the storage area including plurality of blocks, one for each train of impulses, each block with plurality of unit areas for numerical storage and additional unit area for control purposes to be marked when a digit is registered and testing means responsive to the control area causing registration in the first block encountered having no marking therein.
50800. B. Bercovitz. Improvements in or relating to tubular structural elements. Tubular structural element having two parallel flanges formed from the material of the tube to engage a gusset joint plate for forming joints with coplanar tubes, the cross sectional area of the tube where the flanges are formed is larger than the cross sectional area of the tube.
50801. Societe dite: SAINT FRERES, Societe Anonyme. Improvements in or relating to circular looms. The hooks are controlled by auxiliary cams equal in number to the hooks the keying angle of which on the control shaft depends on the keying of main cams controlling the heddle frames.
50802. Societe dite: SAINT FRERES, Societe Anonyme. Device for pulling the cloth in a circular loom. The fabric is subjected to the actions of two distinct pulling devices having two equal positive actions, one on one thickness, the other on the other thickness of said fabric.
- DECEMBER 9.
50803. Council of Scientific and Industrial Research. Synthetic tanning materials. Reacting the sulphonated condensation product of phenols and formaldehyde with reducing agent in metal in alkaline medium.
50804. Council of Scientific and Industrial Research. Synthetic tanning materials. Dehydrating the sulphonated condensation product of phenols and formaldehyde acylating with acetic anhydride and treating the product with sodium sulphite.
50805. Council of Scientific and Industrial Research. A new fruit product. The fruit product comprises fruit pulp, reducing and non-reducing sugars, milk solids and edible fat.
50806. Council of Scientific and Industrial Research. An improved process for the enzymic unhairing of skins and hides. Immersing skins in unhairing bath comprising a mixture of mader latex-common salt and water and bating the skins.
50807. J. M. Mehta. Improved metal buckle for leather or the like belts. The inner surface of the buckle is provided with hooks and the three sides thereof are bent to form an inverted U-shaped flange.
50808. NYEGAARD & CO. A/S. Process for the making of adrenocorticotrophin preparations having a prolonged action from act with high specific activity. [Addition to No. 46953.] Adrenocorticotrophin is precipitated from a relatively concentrated solution of adrenocorticotrophin and protamine sulphate.

50809. Linoleum Manufacturing Company Limited. Treatment of drying oils for use in the manufacture of linoleum and like coverings. Blowing during "smacking" or oxidising process a quantity of nitrogen into the mass of oil.

50810. Linoleum Manufacturing Company Limited. Treatment of drying oils for use in the manufacture of linoleum and like coverings. Blowing during "smacking" or oxidising process a quantity of carbon dioxide in the mass of oil.

50811. Kay & Lee Limited. Improvements relating to trousers. Having means to grip the leg of the wearer and to hold the trouser leg raised with the bottom well up to allow the material to folded down over the bottom.

50812. Dronsfield Brothers Limited and S. W. Dronsfield. Improvements in or relating to the grinding of the card clothing of carding engines. (June 20, 1953.) Driving the carding engine and the grinders at appropriate relative grinding by portable power plant through flexible driving shafts independently of the source of power normally applied to drive the carding engine.

50813. Void.

50814. Lonza Electric and Chemical Works Limited. Process and means for the manufacture of acetylene-containing gases. Acetylene is produced between two carbon electrodes by intermittent electric arc.

50815. Societa Forni Lubatti. Improvements in or relating to electric furnaces heated by the electric resistance of slag. In the slag is at least partially immersed a body having the form of a closed circuit and made of an electrically conductive material encircling the area in which the electrodes are placed.

50816. S. F. Jhanghiani. Improvements in or relating to snow and insect deflectors for motor cars and road vehicles. Deflector fitted on to vehicle builds column of air serving as wall of air in front of wind screen to deflect snow or insects away from wind screen when vehicle is driven.

DECEMBER 10.

50817. R.T.O. Williams. An improved screen, usable for sub-artesian bores, and method of making the same. A tubular body formed with a number of

external ribs, inlets into the body from between succeeding ribs, and a wire wound helically about and secured to the body.

DECEMBER 11.

50818. Monsanto Chemicals Limited. Improvements relating to polystyrene plastic materials. Mixing polystyrene and 20 per cent. of its weight of unvulcanised natural rubber, each in solid divided form and blending them by softening.

50819. Dunlop Rubber Company Limited. A method of measuring the bore of tubing. Inserting a magnetisable ball in the tubing under influence of magnetic field and recording air pressure in tubing electrically.

50820. Lawler, Ayers & Company Limited. Improvements in bending machines for tubes or the like. (December 19, 1952.) Comprising a pair of plates between which a bending former having a series of forming surfaces is mounted, a pair of legs rigid with the plates, a series of rods mounted parallel with rigid legs and a clamp consisting of a block rotatable with the former.

50821. Kaypee & Co. A stand for fire arms. Fire arms are securely held at one or more places by gripping devices on the racks.

50822. Cognate with the application No. 50681. Dt. November 21, 1953.

50823. Resilla Cots and Rollers Limited. Improvements in fibre drafting cots, aprons and the like. (December 15, 1952.) Comprises a synthetic rubber-like material, mixed with a water-soluble salt of alginic acid.

50824. Creed and Company Limited. Improvements in or relating to printing telegraph apparatus. (December 12, 1952.) In which notched discs rotatable into positions according to received signals, for selecting a character for printing, are connected by Bowden cables to corresponding members of a tape perforating mechanism.

DECEMBER 12.

50825. Yardney International Corporation. Improvements in electric accumulators. At least one of the electrochemically active materials is in finely divided form and the different active materials disposed in respective separate compartments isolated from each

other and defined by rigid separators to permit development of electrochemical reactions between adjacent bodies of active materials of different natures, the separators being sealed to the casing at a leak-proof joint.

50826. Babcock & Wilcox Limited. Improvements in tubulous vapour generating and superheating units. Means are provided for recirculating gases from the gas flow path beyond the superheater and for introducing them into furnace chamber.

50827. Tootal Broadhurst Lee Company Limited. Improvements in or relating to the treatment of yarns and the like with liquids. (December 18, 1952.) By passing the material between two rotating rolls having liquid in the bight therebetween wherein the concentrated liquid is diluted in a separate tank before being supplied to one of the rolls.

50828. G. D. Gade. Improvements in or relating to perpetual calendars. Having two members co-operating with each other, the second member constructed of two parts, on one of which the year markings and on the other day markings are provided.

DECEMBER 14.

50829. T. Krebs. Electric spray-gun. Pressure developed by a pump, without use of compressed air; pump piston reciprocated by oscillating armature of an electromagnet.

50830. A. Lorenz. An adjustable reclining chair. The rear end portion of a seat is pivoted to a back-rest at a point above the plane of the pivoted connection of the back-rest with a support and guiding means are engaged with the support and a portion of the seat remote from the pivotal connection of the seat with back-rest.

50831. The General Electric Company Limited. Improvements in or relating to control systems for electric motors. (December 22, 1952.) The reactance of the alternating current winding of the magnetic amplifier controls the torque from the electric motor.

50832. Industrial Devices, Inc. Improvements in or relating to liquid powered single stage impulse-reaction turbine. Stream intercepting faces of vanes, when in stream intercepting position, are parallel to axis of nozzle orifice; circumferential spacing of vanes such

that liquid stream impinges only portions of their work faces between stream intercepting edges and radial median lines of vanes.

50833. Stamicarbon N. V. Process of preparing calcium carbide. The oxygen-containing blast is fed at a rate of 40 to 100 m/sec. through annularly arranged tuyers of a shaft furnace wherein said tuyers slope downwardly at an angle of 10 to 30° to the horizontal.

50834. British Telecommunications Research Limited. Electrical signalling systems. (July 25, 1951.) [Divided out of No. 47754; ante-dated to July 24, 1952.] In which the storage area including plurality of blocks, one for each digit, each block of plurality of unit areas for storage and additional unit for control which is marked prior to transmission but marking removed after transmission and testing arrangements responsive to control area which cause control of impulse transmission by the first block encountered having marking in associated control area.

50835. British Telecommunications Research Limited. Electrical signalling system. (July 25, 1951.) [Divided out of No. 47754; ante-dated to July 24, 1952.] Magnetic drums registering different groups of digits and control arrangements to transmit over different outgoing circuits of impulses corresponding to the digit registrations, scanning arrangements associating the digit with all the outgoing circuits at least once during the transmission of a single impulse.

50836. British Telecommunications Research Limited. Electrical signalling systems. (July 25, 1951.) [Divided out of No. 47754, ante-dated to July 24, 1952.] Comprising control arrangements effecting counting by successively altering registrations on the drum at predetermined intervals and further control arrangements responsive to the registration reaching a predetermined value to terminate the transmission of impulses.

50837. British Telecommunications Research Limited. Improvements in or relating to telephone or like signalling systems. (July 25, 1951.) [Divided out of No. 47755; ante-dated to July 24, 1952.] Continuously operating distributing arrangements associating successively lines with magnetic drum on a time division basis, control equipment for the drum including testing

means which tests each line for calling or non-calling condition while it is associated with the drum.

50838. British Telecommunications Research Limited. Telephone or like signalling systems. (July 25, 1951.) [Divided out of No. 47755; ante-dated to July 24, 1952.] Registering arrangements for impulses transmitted from a calling line successively in code and counting device producing timing registrations on the drum to measure the interval between successive impulses and if it exceeds a predetermined value to control the registering arrangements to cause subsequent impulse to be registered in different storage space.

50839. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of acylated sulfisoxazole compounds. Sulfisoxazole is treated with an acylating agent in an inert organic solvent in the presence of an inert tertiary organic base.

50840. Roulements A Billes Miniatures S. A. Spindle bearing and fabrication thereof. One of the bearing member is provided with nozzles and is a relatively thin member made of injection molded or sheet metal material.

DECEMBER 15.

50841. D. Napier and Son Limited. Axial flow compressors. (December 15, 1952.) A part of the rotor which carries blades of the earlier stage is mounted for rotating independently of and other part of the rotor which carries blades of the latter stage.

50842. The Mining Engineering Company Limited. Conveyors. (January 1, 1953.) Having independent load carrying and tension elements and means provided at one or more points along the length of the conveyor to transmit power between the tension elements in the carrying and return runs.

50843. The Mining Engineering Company Limited. Chain belt conveyors. (January 1, 1953.) Comprising separate tension and load carrying elements, an assembly of a carrier for the load carrying element and roller for the tension element in which links connecting lengths of chain forming the tension are interposed between the carrier and roller.

50844. Abbott Machine Co. Inc. Winding machine for yarns, threads and the

like. (March 23, 1953.) Means for holding a winding bobbin, mechanism for imparting an intermittent rotary movement to winding unit, mechanism for restoring a thread guide to a position adjacent to the position to be occupied by the base of a new winding bobbin.

50845. Stamicarbon N. V. Process of preparing active sulphonated carbonaceous material, suited for decolourising and clarifying liquids. Treating oxidized coal particles at elevated temperature with such a quantity of sulphonating agent that a thick mass of highly swollen particles is obtained and continuing sulphonation until a part of coal particles becomes soluble.

50846. Dunlop Rubber Company Limited. Improvements in tubeless pneumatic tyres. A rubber annulus located between the outer cover beads makes an air tight seal at the beads of both the outer cover and the inner casing.

50847. Sherritt Gordon Mines Limited. Method of recovering metal values from solutions. Reacting the solution with a reducing gas in a reaction vessel maintained under super atmospheric pressure and at an elevated temperature, a nucleating agent being present in the solution to initiate and accelerate the reaction.

50848. American Cyanamid Company. Improvements in or relating to curable resinous composition and articles made therefrom. (April 13, 1953.) Comprising reaction product of (A) aldehyde and (B) 4-6-diaminotriazine having carbon atom at 2-position, alliphatic, cyclo alliphatic, aralkyl or mono or disubstituted amino radicals and 10 per cent. to 50 per cent of alkyd resin.

50849. American Cyanamid Company. Improvements in or relating to resinous impregnated articles. (April 13, 1953.) Compatible blend of (1) reactive product (A) aldehyde and (B) 4-6-diaminotriazine where C in 2 position has aryl radical and (2) 10—50 per cent. of alkyd resin.

50850. The Gillette Company. Improvements in or relating to blade dispenser. A stack of blades is urged towards the level of an exit opening of the dispenser by a spring supported in bowed position.

50851. British Insulated Callender's Cables Limited. An improved joint for an electric cable. (January 25,

1953.) Wherein a conductive screen having the form of a three-armed star made of two metal pieces, each bent through 60° , two similar parts of the two metal pieces forming one arm of the star and other parts of the pieces projecting oppositely at 120° and forming two other arms of the star, an arm being located between each pair of cable cores.

50852. Societe Anonyme Des Manufactures Des Glaces Et Products Chimiques De Saint Gobain, Chauny & Cirey. Process for the manufacture of concentrated phospho-nitric acid. Nitrogen oxides are absorbed in dilute phosphoric acid containing more than 20 per cent. of water.

50853. Prof. Dr. Ing. W. Kniehahn. Improvements in or relating to optical composing machine. Comprising carriers with letters, fed from a magazine to image slit when key associated to the letter is depressed means for justifying each composed line of letters, means for optically transmitting and recording the slit image and means for returning the carriers to their initial position after the line has been recorded.

50854. Robertson Thain Limited. An improved manufacture of laminated building materials. Asbestos-felt sheets bonded to one or each side of a rigid heat insulating board.

50855. Void.

50856. Caroline Elisabeth-Stiftung. Process for metal coating volatile-containing materials and apparatus for carrying out such process. The material is exposed to metal vapour at a temperature of -75°C . and subatmospheric pressure.

50857. C. A. Parsons & Company Limited. Improvements in or relating to dynamo electric machines. (January 13, 1953.) The outer conductors of all the phases arranged to have a minimum resultant external field.

50858. Sri Shankar Engineering Works. Improvements in or relating to flour mill or machine. Casing of grinding stones is made of two parts, one of the parts having integrally formed feed chamber and a tubular extension to house a feed worm, the other part having driving a shaft passing through it.

DECEMBER 16.

50859. United States Steel Corporation. Automatic centering apparatus. Apparatus comprises a rotatable member having an outer peripheral surface adapted to contact the object to be centered, the member having a plurality of movable flexible laminations on its outer periphery arranged on both sides of a transverse central plane, the laminations being inclined radially towards the axis of the roll.

50860. Ortho Pharmaceutical Corporation. Radiopaque formulation. Comprising an aqueous solution of polyvinyl pyrrolidone and a water-soluble salt of an iodinated aliphatic, aromatic or heterocyclic compound.

50861. Ciba Limited. Process for the manufacture of new carboxylic acid anilides. Reacting salicylic acid with p-bromo or iodoaniline to produce salicylic acid para-bromo or iodoanilide.

50862. F. L. Smidth & Co. A/S. Method and apparatus for screening of liquid or dry material. The movement of the residue along the screen surface takes place on a film or cushion of the cleansing medium.

50863. Council of Scientific and Industrial Research. Synthetic tanning materials. Sulphonated and condensed phenolic coal-tar distillation products are hydroxylated with condensed resorcinol.

DECEMBER 17.

50864. Council of Scientific and Industrial Research. Preparation of 2-hydroxy-3:6-dimethoxy acetophenone. 2, 5-Dihydroxy-6-methoxy acetophenone is fully methylated to the trimethoxy ketone and subsequently partially dimethylated with aluminium chloride to yield 2-hydroxy-3, 6-dimethoxy acetophenone.

50865. The Bradford Dyers' Association Limited. Textile ornamentation. (December 22, 1952.) Comprising a dyeing operation and the employment of a resist agent capable of preventing or reducing the acceptance of the dye by the polymeric material of the textile article.

50866. Trans-Europe G.m.b.H. Sliding clasp for engaging and disengaging fastener strips provided with gripper and head profiles. Comprising a body

having on the head side an admission aperture with a continuous longitudinal slot for the head profile of one stringer extending away from said aperture.

50867. L. P. Franke and Wright Electric Motors (Halifax) Limited. Improvements in or relating to electric generators. (December 18, 1952.) In which an automatic voltage regulator is mounted within the structure of the generator so as to lie within the path of the flow of cooling air supplied to the generator.

50868. General Railway Signal Company. Improvements relating to binary counting equipment. Binary counter comprises a plurality of digital relays arranged in response to successive counts operated through sequence permutation.

50869. H. Kurg. Improvements in and relating to diesel engines. [Addition to No. 48716.] Longitudinal axis of combustion chamber coinciding with or arranged at an angle or parallelly displaced from cylinder axis.

50870. A. Sanghi. Improvements in or relating to tube-well. The tube-well has in its bore a layer of fine gravel along the walls of the bore and successive concentric layers of gravel of larger size and a housing pipe carrying a filter at its lower end extending from the ground level in the innermost core of gravel, the length of the pipe being shorter than the aquifer tapped.

50871. H. W. Waldenmaier. Improvements in or relating to butterfly valves. Flap is pivotally mounted with in a casing and carries a complementary valve surface with means allowing limited resilient axial displacement.

50872. Void.

50873. Void.

50874. Void.

DECEMBER 18.

50875. Void.

50876. Void.

50877. Abbott Laboratories. Method of preparing stable solutions of thiobarbituric acid compounds. (August 18, 1953.) Incorporating a thiobarbituric acid type compound or its salt in a parenterally acceptable water miscible non-aqueous organic solvent and a water miscible alkaline reagent.

50878. Stamicarbon N. V. Process of preparing calcium carbide in a shaft furnace. The weight ratio between the calcium oxide and carbon in the fuel calcareous addition mixture fed into the top of the furnace shaft is greater than $\frac{1}{4}$ and lower than $\frac{1}{2}$.

50879. Aplin and Barrett Limited. Improvements relating to the production of milk tablets. Coating milk powder with aqueous emulsion of hydrogenated fat or fatty oil prior to tableting.

50880. Western Electric Company Incorporated. Improvements in impedance converting devices employing transistors. (March 12, 1953.) Including a transistor having two pairs of terminals and an impedance element connected to the base.

50881. B.M.S. Bhardwaj. Improvements in or relating to call bells or like electric signalling apparatus. Comprising signal actuating unit and signal indicating unit; the circuit for operating the latter unit being automatically completed or broken upon the hanging of a handy article upon a hanger in the latter-said unit or upon the removal of said article from the hanger.

DECEMBER 19.

50882. Creed and Company Limited. Facsimile scanning drum sheet holder apparatus. Having means for fastening one edge of transparent wrapper to and along the drum and a means for releasably fastening opposite edge position of the wrapper along the drum including means for maintaining resilient tension on the wrapper for tensioning the latter against a sheet of copy to be scanned.

50883. Societe d'Applications Generales d'Electricite & de Mecanique. Improvements in heald-actuating and controlling mechanism in circular looms. One or more rotary cams coaxial with the loom and a plurality of sets of elements, each set comprising a transmission element associated with the cam and carrying a cam-follower roller.

50884. J. Pfistershammer. Structural material and method of producing the same. Sheet member covered over the entire sheet area with elevations which have curved cross-section in every direction of the sheet plane.

50885. American Chemical Paint Company. Improvements in or relating to processes for the production of rosin

amine derivatives, and treating solutions for metals containing them. (August 10, 1953.) Reacting a resin amine a ketone and formaldehyde.

50886. H. J. Longley. Collapsible crate or like container. Comprising bottom panel and therein hinged side panels provided alternately with hooks and eyes at edges to form corners when engaged and locking means therefor to prevent inward collapse.

DECEMBER 21.

50887. Void.

50888. Void.

50889. The Dow Chemical Company. Improvements in or relating to anodizing bath for and method of producing a corrosion resistant anodized coating upon light metals. An aqueous solution containing the ammonium radical in an amount between 3.2 and 15 per cent, the fluoride 6 per cent, phosphate 2 to 10 per cent, sodium between .3 and 5 per cent and hexavalent chromium radical between about 0.3 and 5 per cent, the bath having a pH between 0.2 and 4.

50890. Imperial Chemical Industries Limited. New Mixed esters and polyesters therefrom. (December 22, 1952.) Interacting monoalkyl ester of terephthalic acid with ethylene oxide and if necessary heating the mixed ester produced for obtaining a polyester.

50891. National Lead Company. Storage battery active material. A mixture of lead oxide and an amount of hydrophilic substance.

50892. American Chemical Paint Company. Improvements in or relating to materials inhibiting corrosion and their use. (February 16, 1953.) Using perylene derivatives as corrosion inhibitors.

50893. Void.

50894. The Wellcome Foundation Limited. Improvements in or relating to phenoxy alkanes. By the conversion by known methods of corresponding phenoxy alkanes having a group convertible to a primary amino group.

50895. Westinghouse Electric Corporation. Improvements in or relating to thermal protection for dynamo-electric machines. Comprises a tube with vaporisable liquid and means for heating different portions of the tube.

50896. Void.

50897. Hughes Tool Company. Earth boring drill. Having a drill head consisting of a plurality of identical arcuate segments fixedly secured together, the upper portion of the segment forms a hollow pin, and the lower portion having a downwardly extending bit leg on which a rolling cutter is rotatably mounted.

50898. Smitsvonk N. V. Surface discharge spark plug. Between electrodes there is a mass of molten glassy material below which there is a heat resistant insulating material.

50899. The Plastic and Industrial Corporation Limited. Improvements in or relating to toys. The toy, supported on two or more legs capable of a rocking movement about one or more cross-shafts supported in bosses provided within the body at right angles to the central vertical plane thereof, has the leg or legs on one side of the plane slightly shorter than that or those on the other side.

DECEMBER 22.

50900. Void.

50901. T. Hindmarch. Improved friction clutch and pinion incorporating friction clutches. (March 25, 1953.) Interengageable friction member associated with a pinion is mounted for rotation upon a bearing separate from the bearing of the friction member.

50902. The Quasi-Arc Company Limited. Improvements in or relating to thrust bearings. (February 5, 1953.) Comprises a piston rotatable with the shaft, within stationary cylinder with means for preventing leakage of fluid between them.

50903. Norsk Hydro-Elektrisk Kvälstofaktieselskab. Heat repressing device in ammonia combustion contact furnaces. Providing a heat resistant gas penetrable screen between the contact and the cooling device.

50904. Casablancas High Draft Company Limited. Improvements in roving guides for textile fibre drafting mechanisms. (January 20, 1953.) A roving guide including a wedge-like body having a single funnel-like aperture extending there through and a separator finger.

50905. Casablancas High Draft Company Limited. Improvements in roller weighting means for textile fibre drafting

mechanisms. (January 22, 1953.) Weighting spring is suspended within a hollow beam mounted out of alignment with the dependent end of a co-operating saddle assembly weighting hook.

50906. The Raleigh Cycle Company Limited. Improvements in or relating to pull-up type front wheel rim brakes for bicycles or the like. (January 23, 1953.) Brake shoe supported at a point offset from the general plane of the stirrup by shoe carrying extensions.

50907. Tecalemit Limited. Improved lubricating apparatus. A coiled tube of capillary dimensions receives lubricant supplied from a pump and discharges it in the bearing.

50908. Gammon (Malaya) Limited and J. B. Murray. Improvements in or relating to concrete and the like piles. (December 30, 1952.) Forming column of material such as sand or earth extending from sea or river bed to a level above water level and of girth greater than that of pile to be formed and forming pile *in situ* through the column and in the ground beneath it.

50909. Les Usines De Melle. Process for the azeotropic dehydration of aqueous acetic acid or mixtures of acetic acid, acetic anhydride and water. Aqueous zone is provided to receive liquid reflux from additional distilling zone and to be passed through without bubbling by rising vapour flow.

50910. Bristol Laboratories Inc. Improvements in the preparation of an antibiotic called Omegamycin. By cultivating a strain of *Streptomyces* BL 567201 in aqueous nitrogenous containing carbohydrate solution under submerged aerobic conditions.

50911. Void.

50912. Ciba Limited. Process and apparatus for producing variable area records on lenticular films. Comprising producing in strips longitudinally of the axes of the lenticulations by diaphragms a light distribution diminishing in each strip from a maximum to the minimum and influencing this light distribution by picture to be copied and arranging in the plane of the film a line screen of which the lines extend transversely to the axes of the lenticulations.

50913. Württembergische Spindelfabrik G.m.b.H. Improvements in grinding machines. The bracket carrying the

cylindrical body is so constrained that the body is displaceable angularly independently of its rotation about a pivotal point in planes including the line passing through the pivotal point.

DECEMBER 23.

50914. Q. A. Kidwai. Improvements in or relating to looms with magnetic shuttle drive. A movable bracket carrying magnets driving the shuttle by magnetic force and drives heald and reed by moving rings.

50915. Wingfoot Corporation. Improvements in tire bead. Providing a rubber strip between bead core and juxtaposed plies, the said strip tapering from the core to the high flexing area of the sidewall.

50916. Tecalemit Limited. Apparatus for lubricating the bearings of rollers or wheels. (January 8, 1953.) Void after publication. Lubricating apparatus has a lubricant-containing tank with a pump, and pump charging member.

50917. Rheinpreussen Aktiengesellschaft fuer Bergbau und Chemie. Process for carrying out the hydrocarbon synthesis with complete utilization of all the gaseous constituents present in the starting gas. (November 13, 1953.) Wherein blast furnace gas after a conversion or with the addition of hydrogen, or carbon monoxide/hydrogen mixtures and/or steam is reacted in the presence of a hydrogenation catalyst.

50918. Rheinpreussen Aktiengesellschaft fuer Bergbau und Chemie. Process for the reactivation of catalysts. (November 13, 1953.) Wherein the catalyst content in the suspension is reduced by dilution during the operating time of the catalyst.

DECEMBER 24.

50919. L. Stammwitz. Pressure lamps for liquid fuels. (September 21, 1953.) Air inlet ports in ring surrounding injection chamber extended over major portion of height of the ring and provided with obliquely directed guards directing air current into injection chamber tangentially.

50920. Joseph Hibbert & Company Limited. Improvements in and relating to rollers and the like for textile machines. The surface of the roller is coated with a substance repellent to the size and/or fibres.

50921. Fisher & Ludlow Limited. Improvements in or relating to constructional elements. (February 7, 1953.) Void after publication. Plurality of rows of transversely spaced longitudinal rows of holes in a strip or a flange of angle element, holes in at least some rows are of elongated configuration and of a length greater than the distance between the holes.

50922. Fulton Bag & Cotton Mills. Improvements in or relating to a rodent repellent composition. The composition comprises finely divided sulphur and a soluble vegetable carbohydrate binder.

50923. Chemical Construction Corporation. Improvements in or relating to method of recovering metals. Comprising pre-heating the solution, separating resultant precipitate, and treating the solution with reducing gas under super-atmospheric pressure.

50924. Void.

DECEMBER 26.

50925. Sudhir Lal Mukherjee and Albert David Ltd. A process for the manufacture of "3:5-dioxypyrazolidine derivatives." [Divided out of No. 49798; antedated to June 25, 1953.] 3,5-Dioxo-1,2-diphenyl-4-aryl pyrazolidines are prepared by reacting 3,5-dioxo-1,2-diphenyl-4-aryl-4-bromopyrazolidines with hydrazobenzene.

50926. Council of Scientific and Industrial Research. Manufacture of nicotinic acid. Oxidising nicotine using pure, recovered oxides of manganese or pyrolusite ore and dilute sulphuric acid.

50927. The Wellcome Foundation Limited. Improvements in or relating to pyrido (2, 3-d) pyrimidine compounds. A 2-amino nicotinic acid is reacted with excess formamide and the product is subjected to thiation, chlorination or amination, or a pyridopyrimidine having a mercapto group in the 2-position is treated with Raney nickel.

50928. The Wellcome Foundation Limited. Improvements in or relating to pyrido (2, 3-d) pyrimidine compounds. Substituted 2-amino nicotinic acid is condensed with urea or thiourea and the product subjected to chlorination, amination, phenylation or thiation.

50929. Koppers Company, Inc. Process and apparatus for the production of fuel

gases and synthesis gases. Reaction products from a gasifier are introduced into a fixed bed of moving solid fuel.

50930. Bajaj Brothers. An improved type of a key holder for holding keys. The key holder is made with two discs and a base portion forming a crooked channel of at least one inch with a circular arm.

50931. Instant Milk Company. Dried milk product and method of an apparatus from making same. Moistening the powder with water and then drying the said moist powder.

50932. The Firestone Tire & Rubber Company. Improvements in or relating to tire rims for use with pneumatic tires. Tire rim has a detachable raised bead seat in cooperation with a detachable rim side ring so that the tire may run on low inflation.

DECEMBER 28.

50933. Void.

50934. Automatic Telephone & Electric Company Limited. Improvements in electric wave filters. (January 13, 1953.) Wherein parallel resonant circuits and series resonant circuits are substituted for inductors and capacitors respectively.

50935. Void.

50936. Crawford & Company (Tottenham) Limited and C. J. Linzell. Improvements in or relating to collets. (April 24, 1953.) Plurality of rigid gripping segment with separate spring elements inserted between the segments.

50937. Void.

50938. Sterling Drug Inc. Improvements in or relating to the preparation of substituted-dihaloacetamides and the products prepared. (April 29, 1953.) Reacting a (substituted-benzylamino) alcohol with a lower alkyl dihaloacetate or dihaloacetyl halide.

50939. Goodyear Aircraft Corporation. Improvements in convertible aircraft. An aircraft operable both as an airplane and as a helicopter with a longitudinal air duct and a well housing a pair of counter-rotatable variable pitch rotors.

50940. Goodyear Aircraft Corporation. Improvements in airplane landing wheels. Including a fixed axle, a hub surrounding the power means and operatively connected with it and a wheel rim carried on the hub.

50942. The Wellcome Foundation Limited. Improvements in or relating to pyrido (2,3-d) pyrimidine compounds. Condensing 4-aminopyrimidine with β -ketoaldehyde or β -diketone in an acidic medium.
50942. C. A. Parsons & Company Limited. Improvements in and relating to method and apparatus for the fluidization of substances in powder form. (January 7, 1953.) The fluidizing medium is admitted through a diffuser.
50943. Standard Telephones and Cables Limited. Insulated electric conductor and method of fabricating same. Comprising a conductor core and a coating of polytetrafluoroethylene containing pores and a perfluorocarbon substance contained in said pores.
50944. Societe d'Applications Generales d'Electricite et de Mecanique. Improvements in means for guiding, supporting and propelling the shuttle of a circular loom with horizontal shed. A shuttle guiding trackway, a shuttle-propelling and shuttle-supporting roller, a carriage and one or more idler rollers.

DECEMBER 29.

50945. Rockwell Manufacturing Company. Power transmission mechanisms for power driven rotary machine tools. A driving element and first gear rotatable but axially fixed on a spindle, second gear non-rotatable but axially movable on spindle, gear train to connect to gears, clutch connect second gear and driving element and manually operable means for selectively control connection between gear train, driving element and second gear and engagement of clutch.
50946. Wingfoot Corporation. Improvements in tube splicer. Comprising in combination means for clamping the tube stock, means for cutting, anvil means for coaction with cutting means and means for retracting the anvil means.
50947. T. Takagi. Method of making cellulose acetate fibres. Impregnating cellulosic fibre with acetylation catalyst, treating impregnated fibre with acetic acid vapor and then with acetic anhydride vapor.
50948. T. Takagi. An apparatus for breaking and drafting a tow of continuous filaments to form spun yarn. Comprising back breaking rollers engaging the tow of filaments, front breaking rollers

spaced therefrom and a travelling friction surface interposed therebetween.

50949. R. Rauter. Dry accumulator. (March 9, 1953.) Void after publication. Comprising at least one tubular positive electrode and a negative electrode each of grid formation, the openings containing micro-porus paste, and arranged such that on discharge ionic discharge occurs only at one face of the electrodes, the opposite face thereof being indirectly subjected to electric stress and electrolyte paste within tubular electrode, between the electrodes and surrounding the negative electrode.
50950. Imperial Chemical Industries Limited. Improvements in or relating to the joining of titanium or titanium base alloys. (January 7, 1953.) The flux composition comprises an alkali metal bifluoride and an additional salt or salts adapted to form a mixture of lower melting point than that of the bifluoride.
50951. Imperial Chemical Industries Limited. Improvements in or relating to the brazing of titanium or titanium base alloys. (January 7, 1953.) Aluminium base alloy containing upto 7 per cent magnesium is used as the bonding material.
50952. Imperial Chemical Industries Limited. Improvements in or relating to the brazing of titanium or titanium base alloys. (January 7, 1953.) Aluminium base alloy containing upto 14 per cent silicon is used as the bonding agent.
50953. Salopian Engineers Limited. Improvements in or relating to agricultural tractors. (January 21, 1953.) A support having a supporting member adapted to be positioned to support a member of the hydraulic lift linkage when the implement is in working position.
50954. Bankim Chatterji. An advertising machine. Comprising a frame work on the two blanked sides of which are provided guide slots to engage the panel shafts, and a lever to bring down and raise a panel through vertical lowering and raising guide slots.
50955. Creed and Company Limited. Perforating apparatus for perforating a tape according to a code. (December 30, 1952.) In which key bars when actuated positively move type bars to print a character and also control a mechanism for perforating a tape in accordance with a code.

50956. Vapor Heating Corporation. Automatic ventilating and cooling system. Consists of combination of an air cooler, an adjustable damper to by-pass uncooled air around it and means for controlling operation of damper.

50957. Stripa Gruvaktiebolag. Procedure and means for the separation of solid materials of different specific gravities according to the sink-and-float method. Material is fed continuously onto a sloping trough onto which an auxiliary medium is supplied, which forms a mobile bed.

DECEMBER 30.

50958. Void.

50959. The General Electric Company Limited. Improvements in or relating to apparatus for passing impulsed electric signals. (January 7, 1953.) Apparatus has a linear characteristic and has a transient response such that upon applying an input signal having a step in its waveform, the resulting overshoot in the output waveform after a period equal to one time interval is same as that after a period equal to two time intervals.

50960. Electraulic Presses Limited. Improvements in and relating to control valves for hydraulic presses. (January 20, 1953.) (Addition to No. 47865.) Valve which makes an auxiliary pump to normally deliver to the press cylinder automatically diverts the said pump to return the cylinder of the press.

50961. Farbenfabriken Bayer Aktiengesellschaft. Dyestuff intermediates for the production of cobalt phthalocyanines. (October 12, 1953.) Wherein reaction products of the non-basic complex cobalt compounds and polyamines are used.

50962. Pest Control Limited. Pesticide. (December 31, 1952.) Consisting of 0:0-dialkyl-5-(alkylsulphinyl)-ethyl thiophosphate compounds in admixture with a solid or liquid diluent or solvent.

50963. J. Stone & Company (Deptford) Limited. Improvements relating to electromagnetic carbon-pile regulators. (December 31, 1952.) The regulator is sealed in inert atmosphere and the enclosures for pile and magnet made highly resistant to heat conduction.

50964. Western Electric Company Incorporated. Fabrication of semiconductive bodies. (May 8, 1953.) Including steps

of heating a body of P-type germanium or silicon in the presence of lithium at a temperature sufficient to cause diffusion of the lithium into a portion of the body.

1954

JANUARY 2.

50965. Void.

50966. Void.

50967. Imperial Chemical Industries Limited. A process relating to the treatment of goods containing cotton. (January 20, 1953.) Passing through hydrocarbon or chlorinated hydrocarbon solvent bath and then through aqueous alkaline solution of peroxygen compound.

50968. PERFOGIT Societa per Azioni. Process for stabilizing of polyamides. Polymerising in presence of compounds containing hydroxyl groups in glycols.

50969. Secotan, Inc. Improvements in or relating to treatment of pervious sheet materials with fluids under pressure. A porous bed covered by a sheet and a fluid pressure differential is applied across the bed.

JANUARY 4.

50970. Director, Indian Institute of Science, Bangalore. Improvements in or relating to extraction and purification of 2-nitrophenanthrenequinone. Phenanthrenequinone is boiled with nitric acid and 2-nitrophenanthrenequinone is isolated from the reaction mixture.

50971. The English Electric Company Limited. Improvements in and relating to liquid servo-motors. (January 7, 1953.) Change over valve exhausting servo-motor through either of two ducts, at least one duct having a normally open valve and a parallel restriction valve and means for automatically closing normally open valve at predetermined position of servo-motor piston.

50972. Marconi's Wireless Telegraph Company Limited. Improvements in or relating to variable frequency oscillators. (January 8, 1953.) Including a source of high frequency oscillation a pulse generator synchronised by said source and a variable frequency oscillator.

50973. Casablancas High Draft Company Limited. Improvements in roller weighting means for spinning and preparatory machines. (January 23, 1953.) A first saddle adapted to weight top rollers in the front and second roller lines and a second saddle adapted to weight top rollers in each rearward line, a projection of the second saddle extending over the first saddle.
50974. E. McConville. Improvements in or relating to interlocking bricks. Bricks of normal proportion provided with wide ribs at certain of their upper faces and complementary recesses at all lower faces, the ribs and recesses being continuous and of trapezoidal sections; header bricks formed with a medial through hole at quarter length from each end; stretcher brick formed with central through hole and grooves at each end face; end grooves or juxtaposed bricks form further through holes.
50975. Dunlop Rubber Company Limited. Improvements in or relating to picking mechanism components for looms for weaving. (February 3, 1953.) Comprising superposed plies of rubberised fabric bonded together, each ply being in the form of a web of fibres adhesively secured together and coated on each side with a rubber compound.
50976. Dunlop Rubber Company Limited. Improvements in or relating to picking mechanism components for looms for weaving. (February 3, 1953.) The picking components are made from a composition containing natural rubber and butyl rubber.
50977. The Glacier Metal Company Limited. Improvements in or relating to centrifugal filter installations. (January 9, 1953.) Comprising a pressure responsive valve arranged between the outlet of the pump and the inlet of the centrifugal filter rotor.
50978. Void.
50979. J. Coops and G.A. Feenstra. Process for checking the fouling of objects, in particular hulls of ships, in sea water. Hulls of ships are sprayed with combustion gases under water.
50980. Eonit Engineering Company, Limited. Improvements in chutes. (January 14, 1953.) Provided with a flexible canvas or like woven diaphragm which is supported on the bottom plate of the chute.
50981. Eonit Engineering Company, Limited. Cement batching plant. (January 14, 1953.) Comprising and upper storage hopper, a lower feed hopper, an archimedian screw elevator and feed hopper the feed hopper having means for aerating.
50982. Societe d'Applications Generales d'Electricite et de Mecanique. Improvements in and relating to circular looms. Providing a reversible weaving ring with two grooved facing in opposite directions, either of which can be engaged with the tongues of the struts.
50983. M. J. Lewenstein. A process for preparing 14-hydroxy dihydromorphinone. 14-hydroxy-dihydrocodeinone is treated with a demethylating agent, the reaction mixture made alkaline with alkali metal hydroxide solution and the product, viz. the morphinone isolated.
50984. Ciba Limited. Process for the manufacture of new piperidines. A pyridine derivative or a quaternary derivative thereof, N-substituted with an aliphatic hydrocarbon radical is treated with a hydrogenating agent.
50985. Ciba Limited. Process for the manufacture of new piperidines. A substituted 5-oxopentane-1-acid nitrile or a derivative thereof is treated with hydrogen in the presence of a hydrogenating catalyst and a secondary piperidine is substituted, if desired, in the ring nitrogen.
- JANUARY 5.
50986. The Sagami Gomu Kogyo Co. Ltd. Apparatus for the continuous production of rubber sacks and the like. A number of models or patterns are removably fixed to an endless chain which are guided to pass through treating zones.
50987. Ajit Kumar Sen. A photographic reproducing, enlarging and reducing device consisting of an optical bench whereupon the object, the lens and the screen are shifted and set up for continuous focus by mechanical operation. Comprising of optical bench on which is slidably mounted an object, lens and screen, the bench being operated by the turn of an endless screw by hand or by motor, through additional units, to give guided linear movements to the object, lens and screen bases so that they are simultaneously and automatically set for sharp image of the object to be thrown on the screen always.

50988. J. Dugler. Process for purifying fabrics and the like. Subjecting the impregnated fabric to heat in a chamber to such an extent that the impregnated liquid is heated up to its boiling point.
50989. J. Aubert. Slide device for dam flashboards. Slide composed of rack and two lateral circulation channels; several sections of rack are separated by passages connecting circulation channels; shaped surfaces at end of sections to guide foot of strut of flash board towards one channel or rack according to direction and extent of movement of foot.
50990. Void.
50991. E. M. Burstlein and Societe Des Acieries De Longwy. Improvements in or relating to processes for preparing coking blends. Forming two separate mixes A and B from different types of crushed coal, mix A containing fusible coal while mix B containing the inert coal, then progressively grinding and screening in a controlled manner and mixing the fractions in a predetermined ratio to obtain a coking blend which is carbonized at high, moderate or low temperature.
50992. N. V. De Bataafsche Petroleum Maatschappij. Liquid organic substances having increased electrical conductivity. Wherein a polyvalent metal salt with a molecular weight of at least 200 combined with a second substance whose molecular weight is at least 200 and for which the product $M \times \sigma$ is at least 10^{-10} .
50993. Societe D'Etudes Et De Participations Eau, Gaz, Electricite, Energie S. A. Improvements in auto-generators of hot gases under pressure, and in particular in free piston auto-generators. Cooling means provided in casing or space directly connected with casing, surrounded by at least part of compressed air which is forced to flow along the length of the cooling means in contact therewith.
50994. S.I.S. Societe d'Investissements Collectifs. Process for decorticating fibrous materials. Conducting suspended fibre bundles in a moving fluid stream, while repeatedly bending said bundles.
50995. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to cathodes having an electron-emitting surface consisting of porous metal, methods of manufacturing such cathodes and electric discharge tubes comprising such cathodes. The interior of the cathode containing a supply of alkaline-earth metal compounds, which supply consists of alkaline earth tungstate to which is added a metal to which can be reduced the tungstate to form alkaline earth metal.
50996. Dexion Limited. Improvements relating to shelving. (January 6, 1953.) Void after publication. The arrangement comprises a rectangular shelf panel provided with flanges at its edges, two opposite flanges being themselves provided with inturned flanges and one reinforcing member of channel section, the member fitting between the panel, the inturned flanges and also within the channel section of another like member.
50997. Strachan & Henshaw, Limited. Improvements in or relating to devices for moving rail wagons and the like. Comprises vehicle adapted to run on track disposed between the usual track rails with one or more retractable wheels or rollers mounted on it.
50998. Strachan & Henshaw, Limited. Improvements in or relating to the control of vehicle movement. Movable apparatus connected to a energy absorbing and dissipating means non-attached to the rolling vehicle.
50999. Messerschmitt A. G. A vehicle body. With one side substantially horizontal about which a hood is pivoted and another side with an inclined edge corresponding to the inclined edge of the hood.
51000. L. V. Iseghem, H. V. Immerzel, R. Beart and M. V. D. Kelen. A process for treating and/or enhancing the spinning quality of textile fibres. Comprising the following steps (1) treatment in a solution containing alkaline sulphite, (2) treatment in a solution containing alkaline carbonate, (3) treatment in an acidic solution, (4) bleaching and (5) finally finishing in an alkaline sulphite solution.
51001. Ciba Limited. Process for the manufacture of new piperidines. 2-Diphenyl methyl piperidines, substituted on the methyl carbon atom by a carboxyl or a free or esterified hydroxyl group, are decarboxylated or reduced.
51002. Ciba Limited. Process for the manufacture of racemates of α -aryl α -piperidyl-(2)-acetic acids and their functional acid derivatives. Treating α -racemates or α -antipodes of α -aryl α -piperidyl-(2)-acetic acids or of functional acid derivatives thereof with alkaline agents.

JANUARY 6.

51003. Void.

51004. Void.

51005. Void.

51006. Parke, Davis & Company. Amino acid compounds and methods for producing the same. [Divided out of No. 49483; ante-dated to May 1, 1953.] Cultivating a microorganism called *Streptomyces Fragilis* under aerobic conditions in an aqueous nutrient medium having a pH of 5 to 8.5 and containing sources of carbon, nitrogen and mineral salts so as to produce O-diazoacetyl-(1)-serine.

51007. Parke, Davis & Company. Amino acid compounds and methods for producing the same. [Divided out of No. 49483; ante-dated to May 1, 1953.] Reacting an N-Carbobenzoxy serine with a haloacetyl halide or haloacetic anhydride to produce O-haloacetyl-N-carbobenzoxy serine and reacting this latter compound with a metal azide to produce O-azidoacetyl-N-carbobenzoxy serine which is finally subjected to reduction in the presence of a mineral acid.

51008. Parke, Davis & Company. Amino acid compounds and methods for producing the same. [Divided out of No. 49483; ante-dated to May 1, 1953.] Reacting an N-carbobenzoxy serine with an azidoacetyl halide and subjecting the O-azido acetyl-N-carbobenzoxy serine so obtained to reduction in the presence of a mineral acid.

51009. Parke, Davis & Company. Amino acid compounds and methods for producing the same. [Divided out of No. 49483; ante-dated to May 1, 1953.] Reacting N-carbobenzoxy serine with a mixed anhydride of carbobenzoxyglycine and subjecting the D-(N-carbobenzoxyglycyl)-N-carbobenzoxy serine so obtained to reduction in the presence of a mineral acid.

51010. Parke, Davis & Company. Amino acid compounds and methods for producing the same. [Divided out of No. 49483; ante-dated to May 1, 1953.] Reacting a N-carbobenzoxy derivative of serine with a glycyl halide or N-carboxyglycine anhydride and subjecting the O-glycyl-N-carbobenzoxy serine so obtained to reduction in the presence of one equivalent of a mineral acid.

51011. Parke, Davis & Company. Amino acid compounds and methods for producing the same. [Divided out of No.

49483; ante-dated to May 1, 1953.] Treating N-glycyl serine with a mineral acid under anhydrous conditions at 0 to 100°C so as to produce acid addition salts of O-glycyl serines.

51012. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a method of producing an electro-luminescent powder. Photo or cathodoluminescent particles are made from a crystalline substance, the crystal lattice of which is made up from at least one element of each of the groups: (1) Zinc and cadmium, (2) Sulphur and selenium, (3) silver, copper, lead, manganese and the like, the number of atoms of groups being arranged in a predetermined ratio.

51013. J. M. Patel and P. B. Panchal. Oil engine fuel pump with overflow valve device. Overflow valve opened by a threaded spindle rotated by governor through link mechanism, fuel injection being controlled according to speed and load.

JANUARY 7.

51014. SKF Kugellagerfabriken Gesellschaft mit beschränkter Haftung. Bearing sleeve for spinning and doubling spindles. Bearing sleeve is wound of a sheet metal strip and is made increasingly flexible from the end thereof, receiving the footstep, to its seat in the bearing housing.

51015. Rotary Hoes Limited. Earth-working rotor for an earth-working machine. (January 8, 1953.) Earth working rotor having blades which are thin and supported, for the operative edges to be further from the rotor axis than are their opposite edges, flatly, and throughout, their lengths from stiff backing plates which are fast with axially spaced, radially-extending supports fast with rotor shaft.

51016. Sir E. O. Williams and O. T. Williams. Improvements in or relating to reinforced concrete constructions. (January 8, 1953.) Inclined tie members extending between pier or column to each deck section stressed to working load by applying dead weight of mould and concrete of next succeeding section and concreted while fully stressed by the load.

51017. J. Hogan. Improvements in or relating to roof tiles. Flat roof tile is characterised in that it is provided with a continuous projection on its underside near the upper end thereof which runs

along a larger part of the width thereof and a lug with a hole, on the underside near the bottom, the lug being provided between two longitudinal ribs of the tile.

JANUARY 8.

51018. Void.

51019. Void.

51020. Huwood Components Limited. Improved means for lubricating rock drills and similar tools operated by compressed air. (January 9, 1953.) Liquid lubricant reservoir surrounding pressure air conduit fitted with open ended shuttle and means feeding lubricant from reservoir to conduit through annular capillary passage between shuttle and conduit.

51021. A. Gardella and C. Gardella. Multi-drawing frame particularly adapted for use on high-speed spinning frames. Comprising a number of draw head sets arranged in parallel-series and decreasing in number from the first set towards the last draw-head which is single.

51022. Standard Telephones and Cables Limited. Improvements in or relating to electrical wave-form receiving circuits. Receiving in two channels and then integrating in a circuit with short time constant.

51023. Standard Telephones and Cables Limited. Pneumatic tape drive. Comprises an air valve having two chambers connected to a piping under pressure and to a vacuum piping.

51024. Void.

JANUARY 11.

51025. Manoranjan Sengupta and Pratap Narayan Choudhury. Improvements in or relating to automatic telephone exchange. Comprises means for holding calling subscribers line circuit, means to release junction, means to release selectors, busy tone release signal being repeated.

51026. Void.

51027. Rheinpreussen Aktiengesellschaft fuer Bergbau und Chemie. Synthesis furnace for the hydrogenation of carbon monoxide in liquid medium. (December 2, 1953.) The area for heat exchange for the catalysts is reduced in a direction of the flow of the synthesis gas.

51028. Emery Industries, Inc. Improvements in or relating to method and

apparatus for the manufacture of aliphatic carboxylic acids. Reacting unsaturated fatty compound with oxygen containing ozone and oxidizing the fatty ozonides with oxygen gas.

51029. Hoover Limited. Improvements relating to electric irons. Including a body, a handle supported above the body by supporting members a rotatable combined dial and control knob of insulating material of the thermostat, the diameter of the control knob being equal to the width of the body.

51030. A. Bugan. Improvements in reinforcing rods, bars or the like for concrete. Reinforcing rods whose surfaces have small longitudinal channels rolled therein, the channels being not more than 12 millimeter wide.

51031. Metallgesellschaft Aktiengesellschaft. Method of and apparatus for treating liquids with granular ion exchangers. The ion exchangers perform a closed cycle through treatment and regeneration overcoming with the aid of sluices differences in pressure existing in the circuit.

51032. M. Comar. Improvements in processes for producing pure ascorbic acid. The crude ascorbic acid is introduced for extraction into a two-phase system formed by two normally mutually miscible liquids and a solid soluble in one but insoluble in the other, the system being so selected that the acid and impurities are soluble in different relative proportions in the two phases and the acid is separated from the extract.

51033. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electro-luminescent powders. Electro-luminescent powder comprising particles constituted by a crystalline substance, the crystalline lattice of which is built up from at least one element from each of the group of 1. sulphur and selenium, 2. zinc and cadmium, 3. copper and gold.

51034. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to magnetic materials of which the remanence and hence the spontaneous magnetisation may reverse their signs under the action of variation in temperature, and use and method of manufacturing such materials. A magnetic material consisting at least in part of one compound of the formula $LiO, 5 Fe (2.5-a) Cr a O_4$, where a has a value between 0.9 and 1.7.

51035. L. R. F. Harris. Improvements in or relating to pulse distribution systems. (January 12, 1953.) Including a single group of pulse generators each independently controllable to supply a number of pulse trains the number of generators being less than the number of units to pulse trains are to be distributed with a minimum of two generators and three units.
51036. Organon Laboratories Limited. Process for the preparation of adrenocorticotrophic hormone preparations. Normal hormone (ACTH) in aqueous solvent is combined with one or more salts, hydroxides or oxides of the metals zinc, nickel, cobalt, copper and iron.
51037. Trubenised Company (Registered Trust.) Improvements in or relating to collars for shirts and like garments. (January 15, 1953.) Band portion of central ply being divided into plurality of separate sections held spaced apart from one another by attachment to two outer plies.
51038. Theodor Rapp K. G. Improvements in or relating to a method of and means for locking screw-threaded nuts on complementarily screw-threaded bolts. Securing a screw threaded nut in adjusted position on a complementarily screw-threaded bolt by forming a transversely directed bore in the shank of the bolt at a pre-selected location adapted to extend adjacent the outer face of the nut when the latter is in the adjusted position.
51039. Ciba Limited. Process for the manufacture of new acylbutyric acids. Process of manufacture in which phenylglutaric acid and its derivatives are condensed with a compound of the formula $C_6H_4R_1R_2$.
51040. A. Brugger. Automatic yarn or thread breaking device for textile machines. Comprising a holder, a thread brake placed on supporting axis, a two-armed rocking lever, a compression spring acting on the thread brake, a pre-tensioned torsional spring connected to two-arms lever and means for varying the pre-tension imparted to said torsional spring.
51041. The Wellcome Foundation Limited. Improvements in or relating to pyrimidine compounds. Condensing 3 aminopicolinic acid with urea and subjecting the product to chlorination, amination or thiation.
51042. The Wellcome Foundation Limited. Improvements in amino compounds of therapeutic value. Converting a compound of general formula $Z-C_6H_5-O-(CH_2)_n-O-C_6H_5=Z$ in which Z is a group convertible to a tertiary amino group.
51043. Morris Motors Limited. Improvements relating to hydraulic shock absorbers. (March 4, 1953.) Part of recuperation chamber becoming hottest during operation provided with external secondary heat transfer surfaces constituted by assemblage of metal fins formed with flanged apertures.
51044. D.F. Ednell. Improvements in and relating to apparatus for the production of fibrous containers. (February 4, 1953.) Comprising conical formers which are raised and lowered to enter a pulp-containing tank, means for thrusting the formers into tapered conical cups and express moisture therefrom.
51045. R. E. L. Warburton and W. H. Sandford. Improvements in clamping devices for securing cables, ropes or the like. (January 20, 1953.) Comprises two members each having longitudinal groove the groove being a V-groove in one member at least.

JANUARY 12.

51046. Wingfoot Corporation. Improvements in landing gear brake pressure metering apparatus. Wheel supported on telescopic strut; brake supplied with fluid under pressure through metering valve controlled by relative movement of parts of strut.
51047. Goodyear Aircraft Corporation. Improvements in method of forming multiaxially-stretched enclosures. Heating a tube of transparent thermoplastic material and stretching such tube both longitudinally and circumferentially.
51048. British Cellophane Limited. Improvements in or relating to the manufacture of generated cellulose films. Applying to the film a liquid aqueous dispersion of colloidal silica, the particles of which are electrically neutral.
51049. Dunlop Rubber Company Limited. Improvements in or relating to belting. Fusing U-shaped strips of thermoplastic material on to the edges of belting assembly.
51050. Dunlop Rubber Company Limited. Improvements in rims for pneumatic tyres. Comprising a rim base having

detachable tyre retaining flange integral with resilient bead seating portion to seat tyre bead.

51051. "Est" Establishment Sciences Techniques. Rolling device for vehicles. A rolling device is provided for neutralizing the rolling effect of some of the rotatable members associated with a determined portion of the track circuit.

51052. The M-O Valve Company Limited. Improvements in or relating to systems for controlling the pressure of a gas in an enclosure. (January 13, 1953.) Comprising substance which evolves gas on heating and reabsorbs it on cooling, the substance being in contact with gas in the enclosure, an electric resistance heater for heating the substance and a barretter electrically connected in series with the heater.

51053. The General Electric Company Limited. Improvements in or relating to radio communication systems. (January 16, 1953.) Comprising a transmitting station, comprising pulse generator means to cause radio transmitting means to transmit bursts of radio frequency energy and means periodically to vary the frequency of the radio transmitting means, and a receiving station comprising radio receiving means and means periodically to vary the tuning of radio receiving means in step with frequency variation of the radio transmitting means.

51054. The General Electric Company Limited. Improvements in or relating to electric pulse generators. (January 27, 1953.) Comprising surface of clock pulses, pulse selecting circuits each with a gate circuit having output connected to delay line, means for applying amplified pulses to open the gate, connection for applying the clock pulses to all gate circuits, means for applying the trigger pulse to open all the gates simultaneously and outputs of gate circuits coupled to coincidence circuit.

51055. Babcock & Wilcox Limited. Improvements in fluent fuel burners. Comprising an assembly of concentric cylindrical fuel nozzles adapted to receive different fuels and to discharge them in a common axial direction, a scroll housing adapted to receive gaseous fuel and to discharge the fuel with a rotary motion to the inlet end of the outermost fuel nozzle.

51056. Spinnbau G.m.b.H. Rolling device for carded fleece. At least one of two

or more working cylinders bears in the direction of its length against a pressure-loaded girder of the same length.

51057. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of producing electroluminescent materials. Mixture of at least one element or compound of each of the groups of 1. sulphur and selenium, 2. zinc and cadmium, 3. copper and gold, 4. aluminium, and fired at a temperature between 800—1200°C in sulphurising atmosphere.

51058. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to regenerators, a method of manufacturing these regenerators and devices intended for manufacturing these regenerators. Having filling mass composed of number of pieces of metal wire with a hydraulic diameter at any point of less than 200 μ , and which are assembled to form felt like homogeneous structure.

51059. Seetru Limited. Improvements in fluid valves and sealing means. (January 13, 1953.) Having a cross-section with a radiused or rounded convex contour on the land which engages the sealing surface and the portion of its cross-section which is placed in the ring groove having in its uncompressed state the shape of the ring.

51060. Void.

JANUARY 13.

51061. Siemens-Schuckertwerke Aktiengesellschaft. A system for energizing synchronous A. C. machines through rectifiers. A self-energizing synchronous A. C. machine is coupled to the main synchronous machine and energizes the said main machine through an adjustable transformer.

51062. Felco Hoists Limited. Improvements in or relating to slings. Comprising a liftable load-carrying frame bearing a saddle member which forms a V-shaped groove for reception and wedging the rope.

51063. Ciba Limited. Stable aqueous emulsion of the oil-in-water type containing binding agents and process for making them. Emulsion containing rubber and alcohol modified aminoplast in the inner phase and acid casein dissolved in the outer aqueous phase.

JANUARY 14.

51064. Void.

51065. J. Stone & Company (Deptford) Limited. Improvements relating to the control of the charging of electric batteries. (January 15, 1953.) Pressure responsive device sensitive to rate of gas evolved in battery arranged to act on pilot device controlling electromagnetic regulator or charge controller to reduce charging current when predetermined gassing rate is attained.

51066. Void.

51067. West Point Manufacturing Company. Improved marking device for bobbin winding machines. Comprising a marking implement movable into the chute and having a forward end carrying a quantity of marking dye and capable of positively engaging and marking a wound bobbin while the latter is stationary in the chute.

51068. Heidenreich and Harbeck. A device for automatic interruption of the supply of spinning machines in particular jute spinning machines. A spring ring of rectangular cross section is provided with a cavity of wedge shape facing the driving shaft, the cavity lying opposite to a recesses provided at the opposite side of the spring ring for allowing resilient movement thereof.

51069. PERFOGIT Societa per Azioni. Apparatus for the synthesis of high polymers. Comprises a prepolymeriser to produce a precondensate, a feed unit for supplying an additive, means for drawing said additive from the feed unit and a polymerisation vessel for final condensation and polymerisation.

51070. Monsanto Chemical Company. Improvements in or relating to method of purifying sugar syrups. Adding to the solution a synthetic water-soluble polyelectrolyte.

51071. The National Smelting Company Limited. Improvements in or relating to the smelting of tin. (February 6, 1953.) Tin ores are smelted in a blast furnace together with zinc ores.

51072. The Brush Electrical Engineering Company Limited. Improvements in or relating to electrical control systems. (January 20, 1953.) A current or voltage obtained from a current or voltage to be controlled is made dependent on frequency and is compared with a reference voltage or current also dependent on frequency for the purpose of obtaining a balance value not affected by frequency.

51073. J. R. Geigy A.-G. Process for the production of nuclear substituted 4-amino-uracils. By condensing N.N. disubstituted urea with an α -substituted cyanacetic acid and treating the product obtained with an alkaline agent.

51074. K. N. Palshikar. A showing machine. The ratio of seed regulating to seed non-regulating part is more than 3:1.

JANUARY 15.

51075. C. T. Patira. Improvements in or relating to a combined key-holder and purse. Comprising a base with key-holder loops, side flaps and one or more pockets at the outside of its body.

51076. Dunlop Rubber Company Limited. Improvements in or relating to belting. Assembling plurality of fabric plies coated with thermoplastic composition in superpositions, heating the assembly by radio-frequency heaters and pressing the assembly keeping between an endless flexible band and the surface of a moving conveyor and maintaining the pressures when the assembly is cooled to set the composition.

51077. British Cellophane Limited. The production of moisture proof film. Partially condensed urea/thiourea formaldehyde resin is applied to an organic base film, the film is dried and moisture proofing surface coating is applied thereafter.

51078. Andre Rubber Company Limited. Improvements in or relating to railway bogies. Wherein the links connecting the spring plank and bogie frame, comprise two rigid members having convex and concave, substantially coaxial opposed surfaces of equal angular subtent not exceeding 180° and consisting of elastomeric material.

51079. Stevensons (Dyers) Limited. A process for the manufacture of permonosulphuric acid. (January 16, 1953.) By mixing concentrated sulphuric acid and hydrogen peroxide, cooling the resulting mixture and immediately diluting it with water.

JANUARY 18.

51080. The Firestone Tire & Rubber Company. Improvements in or relating to tire tread. Comprising tread portion formed with a plurality of circumferential ribs defining intervening

grooves some of said ribs being formed with a multiplicity of angular blocks.

51081. British Cellophane Limited. Improvements in or relating to the manufacture of regenerated cellulose film. Bringing a pair of purified regenerated cellulose films in gel state into continuous intimate contact, treating the pair of films with hydrophilic colloidal dispersion of partially condensed condensation product drying the pair of films and finally separating the two plies.

51082. B. H. Tattersall. Weighting motion for looms. A bracket, a lever pivoted to said bracket, a spring attached to said lever and adapted to engage a chain passing around a warp beam ruffle, a fixed plate with spaced holes, and a pair of captive pins.

51083. Void.

51084. Void.

51085. Ocrietfabriek N. V. Improvements in or relating to bath, sink, combined-bath and sink or like device. Bath or sink, when used as washing machine fitted with water agitating or pulsating device having a shaft extending through discharge opening or additional opening and driven by shaft of electric motor supported from bottom of bath or sink, outside it.

51086. S. A. Arnaldo Vigorelli. Sewing machine for embroideries with different patterns. Devices for shifting needle from sewing line comprising means for connection with one or other of plurality of cams each of different profile and each independently able to produce different patterns; cams not replaced modified or shifted in machine for reproducing patterns.

51087. L. R. F. Harris. Improvements in or relating to electrical selecting systems. (January 20, 1953.) Comprising resistors, means for indicating a different pulse train by each combination of registers and means for applying the pulse trains to means responsive to one of the pulse trains to operate with set of register the combination indicating the one pulse train.

JANUARY 19.

51088. Void.

51089. S. S. Ponkshe and S. S. Ponkshe. Improvements in or relating to threshing, and pounding mill or apparatus. The threshing mill comprises a tapered roller or rollers rotated on an outward-

ly downwardly inclined pavement on which materials to be threshed are spread, the rotation being effected by animals yoked to the horizontal axis of the roller.

51090. Godrej & Boyce Manufacturing Company Limited. Improvements in or relating to metal, particularly steel, cupboards and like articles of furniture, chests, boxes and like containers. Door or lid has brackets which can project through the body of the receptacle when the door is closed and can be engaged by locking bolts.

51091. Alam Muntz & Company Limited. Improvements in and relating to free-piston gas-generators. (February 5, 1953.) Compartment enclosing and spaced from exhaust manifold preventing access to outside of manifold by air within remainder of engine case.

51092. C. C. Wakefield & Company Limited. Improvements in or relating to lubricating compositions. (January 28, 1953.) Comprising castor oil and at least one neutral organic ester.

51093. Dunlop Rubber Company Limited. Improvements in or relating to endless tracks for vehicles. (January 21, 1953.) The flexible plate comprises at least one pair of rigid members connected by inextensible member.

51094. Lionwald Limited. Improvements in methods of connecting members, more particularly in the construction of metal frameworks. Forming one member with an opening, deforming the material outwardly at one or both sides of the opening so as to produce an enlargement of the opening and a corresponding projection, passing the other member through the opening so as to fit into the enlargement, thereafter the securing the members together.

51095. E. G. Stimpson. Improvements in or relating to sheet material dispensing apparatus. (January 20, 1953.) Comprising roll of material within housing and exterior means for manually operating a mechanism of rollers to grip and feed the material out.

51096. E. K. Cole Limited. Improvements in or relating to Automatic Gain control in television receivers. (February 3, 1953.) Of the type using a multi-electrode valve for separating the picture and synchronising signals, in which the grid-leak resistor of said valve is connected between the control grid and the cathode and has a tapping

connection to provide A.G.C. potential, a variable bias resistor together with a rectifier in the cathode circuit providing delay potential.

51097. S. Macro. A Loom Shuttle Swell. The adjustable stop against which the rear link is adapted to press comprises a cam with means for locking it.

51098. Standard Telephones and Cables Limited. Improvements in or relating to sealing glands for electrical conductors passing into submarine cable repeater housing. (January 20, 1953.) Methods of sealing a conductor through a bulk-head separating a comparatively low pressure chamber from a region of high pressure, consists in sealing an insulating bush in a passage through said bulkhead and drawing the conductor into a bore in the bush if less diameter than a portion of the conductor.

51099. Standard Telephones and Cables Limited. Improvements in or relating to submarine cable repeater housings. (January 20, 1953.) Including a bulk-head closing a chamber containing electrical apparatus and subjected on one side only to hydrostatic pressure so as to be pressed against a shoulder and an annulus of soft metal forming anti-diffusion seal between the bulkhead and the housing.

51100. Standard Telephones and Cables Limited. Telecommunication system. Comprising first and second sets of connecting channels, each set divided into groups and group selectors inter-connecting said sets.

51101. Standard Telephones and Cables Limited. Improvements in electric Cables. Comprising polyethylene, polyisobutylene and carbon black.

JANUARY 20.

51102. H. N. Contractor. Improvements in pirns for use in automatic cop-changing shuttles of textiles looms. Providing the head of the pirn with a sheath like shield having circular elevated pressed ridges on the body.

51103. J. Lyons & Company Limited. Improvements in or relating to machines for extracting stalk from tea. (January 22, 1953.) Including a corrugated support having perforations along the base of each corrugations and means for agitating the support.

51104. Saladin & Co. Process and devices for applying substances to carries with the aid of an electric field. Particles of substance to be applied enclosed in hollow electrically conducting container and delivered therefrom mechanically and/or pneumatically through apertures in container into electric field maintained between carrier and container.

51105. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to dispenser cathodes and methods of manufacturing such cathodes. Wherein the supply in the cavity consists of a compact mass of alkaline-earth oxide which has been sintered.

51106. Utah Scientific Research Foundation. Improvements relating to balanced oscillatory drive means in for a power driven moving or other machine having a reciprocable device. Mechanism for converting rotary motion of power-driven driver into oscillatory motion, oscillatory member transmitting reciprocatory motion to knife of mover and oscillatory counter balance operated in opposed synchronism with oscillatory member, these two being suspended side by side from pivots above mechanism.

51107. Creed and Company Limited. Improvements in or relating to printing telegraph apparatus. (March 31, 1953.) Providing arrangement for recognising the presence of a combination of elements all of one kind, in perforated tape-passing through a tape transmitter.

51108. E. K. Conradty, P. Conradty, M. Conradty and C. Conradty. Improvements in or relating to arc lamp cathodes. Containing two parallel cores, the spacing of which varies depending on the current load and the diameter of the anode, but which is at least 0.5 mm.

51109. Gutehoffnungshütte Sterkrade Aktiengesellschaft. Improvements in or relating to the production of compressed air in mines. Work or power obtains underground by expanding air is utilised for producing compressed air.

51110. Farbenfabriken Bayer Aktiengesellschaft. Impregnating agents. (June 9, 1953.) Impregnating compositions comprise carbamic acids containing higher aliphatic hydrocarbon radicals (8-C. atoms) and paraffins, waxes, fats, resins, salts of polyvalent metals, soaps or silicones.

JANUARY 21.

51111. Westinghouse Barke & Signal Company Limited. Improvements relating to fluid pressure operated variable load vehicle braking apparatus. (March 10, 1953.) For proportional to the vehicle load applied to valve through an arm pivoted on a pivot fixed relative to the valve body.
51112. Flexigrip Limited. A sliderless fastener structure for pouches and the like. Having a tab suitably attached to one strip of a sliderless fastener to provide in combination with the opposite strip means for opening or closing.
51113. Aktiebolaget A. Ekstroms Maskinaffar. Improvements in devices for cleaning gas-swept heating surfaces in boilers, superheaters, air preheaters, economisers and the like with steel pellets or the like. Wherein the fan means convey the cleaning particles to the feeding means during the interval between successive cleaning period to be dropped against the surface to be cleaned.
51114. The Tata Iron & Steel Co. Ltd. Methods of and composition for manufacture of refractory material. [Addition to No. 26688.] Magnesium oxide is introduced in the mixture of calcined fire clay and plastic fire clay.

JANUARY 22.

51115. Merck and Co., Inc. Synthesis of folic acid. Hydrolysing 2-acylamino-10-formyl-pteroyl glutamic acid.
51116. Standard Telephones and Cables Limited. Improvements in or relating to the storage of intelligence. (January 23, 1953.) Comprises a number of stores and user equipments and means for allowing in turn any desired number of free stores.

JANUARY 25.

51117. F. D. Gheyara. Improved jute loom picker. Folding the rectangular piece of hide in such a manner that its longer edges lie together along the centre line of the piece which is then bent from the middle and inserting another piece in between the folding.
51118. Imperial Chemical Industries Limited. Improvements in or relating to the production of hexachlorocyclohexane. By chlorinating a mixture of benzene and a solvent at temperature -40°C to $+40^{\circ}\text{C}$ in the presence of

actinic light and maintaining the concentration of free chlorine within certain defined limits.

51119. Dunlop Rubber Company Limited. Electrically conductive polyvinyl resins. Comprising intimate admixture of conductive rubber and polyvinyl resin.
51120. Dunlop Rubber Company Limited. Resinous reaction products and their method of preparation. Of polyhydric phenol lower aliphatic ketone and a rubbery copolymer containing carbonyl groups.
51121. L. Vella. Machine for gauging cylindrical articles. Comprising a pair of rotatable members, and means for imparting a rotation to one of the members to vary the gap between the members.
51122. Pittsburgh Plate Glass Company. Improvements in or relating to forming and fusing multifocal lens. Supporting a glass element with its ground and polished surface facing upwardly and impinging molten glass of different refractive index upon its ground and polished surface, such as to flow the glass progressively across as to flow the glass progressively across said surface, until the entire said surface is fused with said glass or different refractive index.
51123. The English Electric Company Limited. Improvements in and relating to contact assemblies for electric switches. (February 6, 1953.) Contact assembly is a U-shaped strip of parallel blades to be engaged to fixed contacts and secured to a bar of insulating material.
51124. The English Electric Company Limited. Improvements in and relating to electric switches. (February 6, 1953.) Provided with an indicator forming part of moving contact assembly.
51125. Dr. S. Athar. Improvements in and relating to cooking or heating units, particularly for domestic use. The air conduit extends continuously but separated from the exhaust gas conduit.
51126. Montechitini, Societa Generale Per L'Industria Mineraria E Chimica. Process and apparatus for granulating superphosphate. Superphosphate is kneaded under pressure and the particles are revolved.
51127. Kennedy-Van Saun Mfg. and Eng. Corporation. Means for handling and transporting pulverulent, granular and

like material. Having a conical casing arranged with nozzles interposed in a conduit transporting the material.

51128. E. K. Cole Limited. Improvements in or relating to magnetic focusing devices for cathode ray tubes. (February 7, 1953.) Comprising two magnets mounted coaxially on two brackets, one bracket being fixed so as the magnets to encircle the neck of the cathode ray tube and the second bracket longitudinally slidable in a direction parallel with the axis of the magnets of means for effecting this slidable movement.

51129. E. K. Cole Limited. Improvements in or relating to ion trap magnet assemblies for cathode ray tubes. (February 10, 1953.) The pole-pieces of ion trap magnet assembly being sufficiently flexible that they may be clipped directly on to the neck of the cathode ray tube.

JANUARY 27.

51130. Void.

51131. Rheinpreussen Aktiengesellschaft fuer Bergbau und Chemie. Process for the hydrogenation of carbon monoxide in a liquid medium. (November 25, 1953.) Synthesis gas being introduced through jets having an inner diameter of from 7 mm. to 15 mm.

51132. P. S. Mohidin. Improvements in or relating to stoves and the like. Having a detachable chimney and wherein the draught is controlled by lids having a skirt with openings, the said lids engaging the cooking pot openings.

51133. Wingfoot Corporation. Improvements in brake having coil spring fastener therein. Coil springs resiliently disposed in bores in positioning member and corresponding bores in lining means.

51134. Allen & Hanburys Limited. Improvements in or relating to novel heterocyclic polymethylene bis-quaternary salts. (February 20, 1953.) Heating polymethylene dihalide containing 12 to 20 carbon atoms with quinoline or isoquinoline.

51135. British Cellophane Limited. Improvements in or relating to the production of moisture proof regenerated cellulose films. Bringing a pair of purified regenerated cellulose film into intimate contact so as to form an

optically unitary film, drying and coating the unitary film on both sides with a moisture proof agent and finally separating the films of the pair.

51136. Chicago Bridge & Iron Company. Improvements or relating to process of electric arc welding. Correlating the rate of moving electrode to deposit a weld bead larger than the welding electrode, directing electrode downwardly and rearwardly towards the joint to permit expanding gases to carry metal deposited towards previously deposited metal.

51137. Olympia Werke Aktiengesellschaft. Typewriter for Indian languages. (October 23, 1953.) Individual characters have thin lines of uniform thickness.

51138. The English Electric Company Limited. Improvements in and relating to electric switches. (February 6, 1953.) Comprises a handle and fulcrum, the handle being slidable in the direction of length.

51139. The English Electric Company Limited. Improvements in and relating to a closure for an electric switch cabinet aperture. (February 6, 1953.) Comprises a cabinet wall with an operating element and a closure.

51140. Cilag Limited. New schiff's bases and their production. (May 1, 1953.) A 5-aminomethyl-pyrimidine, further substituted in the ring, is reacted with an aldehyde or derivative thereof to yield Schiff's bases.

51141. Unilever Limited. Improvements in the manufacture of protein filaments. (February 13, 1953.) Coagulating protein filaments in acid bath and treating said filaments with aqueous solution of alkaline salt which gives rise to gas or reaction with residual acid.

51142. Dr. R. de Mello. Improvements in or relating to the manufacture of corrugated plywood. Veneer sheets of plywood are caused to conform to a corrugating mould so that the central portion of the sheet is corrugated first and then neighbouring portions.

51143. Powers-Samas Accounting Machines Limited. An improved method of and apparatus for defining characters on impression-receiving-material. (March 18, 1953.) By determining the maximum height and width of a character by moving the marking end of the stylus simultaneously in two paths at right angle to each other and during that

movement, applying discrete impulses to the stylus to effect the marking.

51144. J. W. Swendsen. Heat exchanger for fluids. Heat exchanger is constructed as a double sided rotatable fan and constitutes a wall between the spaces for fluid exchanger.

51145. Madura Company Limited. Improvements in or relating to roofing tiles. Longitudinal edge of the upper surface of the tile would completely overlap the double interlock.

JANUARY 28.

51146. Nigos Corporation. Improved grinding mill and the like. The grinding surfaces are maintained parallel by a screw means fitted at one end of the steady stone.

51147. Void.

51148. AB Tudor. Improved method of manufacturing separators for galvanic primary or secondary cells. (January 29, 1953.) Glass fibres sprayed with aid of stream of gas on a sheet.

51149. Void.

51150. Bundy Tubing Company. Improvements in apparatus for bending tube. Comprising a bending form and a forming pad support which are mounted for controlled relative movement, and in which a forming pad having a groove is mounted on the pad support so as to be slidable.

51151. Miss M. J. Ringstrom. Self hardening lacquers. Containing a substance which becomes a reactive hardner when comes in contact with air.

51152. Mo Och Domsjö Aktiebolag. The Production of films of Predetermined shape. (February 16, 1953.) Bringing surface of a former to a temperature higher than flocculation temperature of cellulose derivative and contacting the former at said temperature with solution of cellulose derivative.

51153. Mo Och Domsjö Aktiebolag. A process of preparing compositions comprising active material on a carrier consisting of a cellulose derivative. (February 16, 1953.) Applying active material in form of solution, emulsion or dispersion in hot water to cellulose derivative carrier of the type soluble in cold water but insoluble in hot water.

51154. British Insulated Callender's Cables Limited. Improvements in impregnating compounds for electric cables

and/or capacitors. Compound comprises from 5 per cent. to 20 per cent. by weight of polyethylene and from 2 per cent. to 50 per cent. by weight of microcrystalline petroleum wax.

JANUARY 29.

51155. The Indian Oxygen & Acetylene Company Limited. Process for substantially eliminating changes in the output of a gas compressor feeding a gas separation unit due to changes in the temperature and humidity of the gas supply to the compressor. (February 10, 1953.) The gas is conditioned before it is fed to the compressor.

51156. Polygram Casting Co. Limited. Improvements in or relating to methods of making shell moulds and cores. (January 30, 1953.) Heating a metal pattern applying to the heated pattern a conditioning agent and applying to the pattern thus conditioned a stripping substance.

JANUARY 30.

51157. Lockspike Limited. An improved fastening spike for use in the laying of railway track. With a head portion and two legs converging to form a wedgeshape zone below it.

51158. H. Wynmalen and J. W. Powell. Improvements in or relating to the construction of walls, ceilings, partitions, and the like. (March 17, 1953.) Trim member positioning boards secured to transverse member of backing framework by clip embracing and slidable along rear flange of trim member and having depending tail engaging transverse member.

51159. T. Zan. Improvements in or relating to appliances for cleaning dehusked paddy to rice. Having a device for controlling the outward flow of the loonzain through the annular space between the polishing cones and the casing around it.

51160. L. A. Huesa. Electric discharge lamp for producing electromagnetic radiations. Electrodes provided with a coating of alkali or alkaline earth metal.

51161. Wingfoot Corporation. Self sealing laminated articles. Consisting of a tear resisting layer and a self sealing layer.

51162. Babcock & Wilcox Limited. Improvements in dust disposal apparatus.

(February 13, 1953.) The separation of dust is done by cyclone separator and controlled by suitable means.

51163. G. N. R. D. Patent Holdings Limited. Preparation of 11-oxygenated steroids. (January 30, 1953.) A 12-Ketosteroid is halogenated to form and 11 α -halide, the 12-Keto group is reduced to 12-hydroxy group, the product is treated with a base to form an 11:12 β -epoxide and the epoxide treated to break the C(12)-oxygen bond to have the oxygen at C(11).

FEBRUARY 1.

51164. Jogendra Mohan Saha and Nahar Singh Jain. Improvements in or relating to sugarcane juice clarification for the manufacture of white sugar. [Addition to No. 48795.] Highly alkaline juice is neutralised by two or more neutralising agents.

51165. Dr. R. S. Dubey, S. S. Mavi and H. Singh. A process for the recovery of useful by-products from molasses. Concentrating clarified solution of molasses to crystallize out a mixture of salts.

51166. Sterling Drug Inc. N-(lower alkyl)-N-(substituted benzyl) dihaloacetamides and the preparation thereof. (August 19, 1953.) N-(lower alkyl)-substituted-benzylamine of formula $\text{Ar-CH}_2\text{-NH-R}$ with a dihaloacetyl halide.

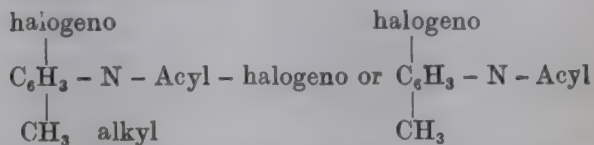
51167. Eli Lilly and Company. Improvements in or relating to method of producing erythromycin and the resulting product. Erythromycin-B is prepared by cultivating an erythromycin-B-producing strain of *Streptomyces erythreus* in a culture medium and separating the antibiotic.

51168. Glaxo Laboratories Limited. Improvements in or relating to the production of penicillin salts. (February 18, 1953.) [Addition to No. 40069.] By reacting free penicillin G with a salt formed from procaine and an aliphatic or substituted aliphatic acid having not more than eight carbon atoms in the straight chain.

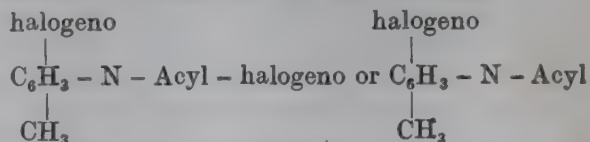
51169. L. J. Biro. Cylinder locks. Comprising a fired cylinder having a longitudinally extending bore, a barrel having a plurality of parallel recesses cooperating with spaced parallel chambers in the cylinder, spring-pressed pins, a plunger, a slot in the barrel, and resilient means for urging the plunger into blocking engagement with bore.

51170. G. & J. Weir Limited. Improvements in or relating to evaporating and distilling plants. Ferrous or ferric ions are supplied to raw water.

51171. Cilag Limited, also known as Cilag Aktiengesellschaft. New halogen-containing amino fatty acid anilides, their addition and quaternary salts and their production. (February 9, 1953.) Reacting secondary amine with a compound of the formula



51172. Cilag Limited, also known as Cilag Aktiengesellschaft. New halogen-containing amino fatty acid anilides and their acid addition salts. [Addition to No. 51171.] Reacting a primary amine with a compound of the formula



51173. Bopp & Reuther G.m.b.H. A rotary pump or like machine. Rotating pistons rotate about their axes and have two approximately semicircular recesses and corresponding number of complementary projections.

51174. I. Amirali. Improvements in or relating to pickers for drop box looms. Enclosing a metal reinforcing frame in the body of the picker.

51175. Sudhir Lal Mukherjee and Albert David Ltd. A process for the manufacture of 3:5-dioxypyrazolidine derivative. Reacting 1 mol of n-butyl bromo malonyl chloride $[(\text{Br}) \quad (\text{n-butyl}) = \text{C} = (\text{COCl})_2]$ with 0.75 to 1 mol of hydrazobenzene in presence of ether and a tertiary organic base.

FEBRUARY 2.

51176. Void.

51177. Void.

51178. Void.

51179. Abitibi Power & Paper Company Limited. Artificial board. (February 19, 1953.) Steps of dewatering the wet lap applying a sheet of paper to the surface of the wet lap and consolidating the wet lap and sheet of paper under heat and pressure.

51180. Farbenfabriken Bayer Aktiengesellschaft. Process of preparing ice-colours in textile printing. Printing fibres with

a paste of diazoamine compounds obtained from dihalogeno-alkyl or dihalogeno-alkoxy anilines and 2-alkylamino-5(4)-sulphobenzoic acids, and ice-colour components, and developing the dyestuff with neutral steam with addition of any compounds capable of splitting off acid or binding caustic alkali.

tertiary amino group and an alcoholic hydroxyl group.

51188. Schlumberger Well Surveying Corporation. Neutron-logging apparatus for investigating earth formations traversed by a bore-hole. A detector for neutrons detects the neutrons which are slowed down by drilling liquid.

51181. Void.

FEBRUARY 3.

51182. Imperial Chemical Industries Limited. New vat dyestuffs. (February 11, 1953.) Treating 11-amino- or 3:11-diamino-benzanthrone-anthraquinone-acridine with a halide of 1-aminoanthraquinone-2-carboxylic acid or with the halide of 1-nitro or 1-chloro-anthraquinone-2-carboxylic.

51189. Council of Scientific and Industrial Research. Preparation of calcium gluconate by the electrolytic oxidation of glucose. A rotating graphite is used as an anode.

51183. H. W. Burrington. Improvements in or relating to moulding machines for the manufacture of building blocks from fly-ash. The consolidating step consists of pressing the material of the block simultaneously in one stage by downward pressure from the top and an upward pressure from the bottom.

51190. Metallgesellschaft Aktiengesellschaft. Extraction apparatus and method of operating same. (December 29, 1953.) Material is treated on a liquid permeable belt with an extractant comprising partition walls which subdivide the layer of the material on the belt at right angles to the movement of the material.

51184. Vickers-Armstrongs Limited. Improvements in or relating to shaft kilns. (February 3, 1953.) Providing a material deflecting member at the region where the shaft converges downwardly to a reduced cross-section, and a fuel burner is provided near the cavity which is formed by the material bounded by the underside of the deflecting member and the surface of the material.

51191. W. & T. Avery Limited. A connecting device for moving parts, particularly spring joint connection for oscillating testing machines. The damping faces of the parts to be joined are equipped with serrated heads.

51185. "METAPIC" S.A. Heddle frame return motion for weaving looms. A pair of lateral brackets, a shaft mounted in one bracket, a hub and an helical gear and drum mounted on the shaft, a spiral spring, a worm, a guiding pulley and a pair of belts.

51192. Standard Telephones and Cables Limited. Improvements in electrical waveguide filters. (August 14, 1953.) Of the type comprising a hollow waveguide including two spaced resonant cavities each comprising a length of said waveguide terminated at each end by an obstacle which produces a desired reactance effect, each obstacle comprising a plurality of spaced members disposed across the end of the cavity.

51186. "METAPIC" S. A. Adjustable buffers for weaving looms. Comprising an elongated buffer body having an axially extending bore, a spring extending within said bore, a first abutment contacting one end of said spring a second abutment member depending from the buffer body and extending within said bore.

51193. E. Green & Son Limited. Improvements in heat exchangers. (May 12, 1953.) Each of the noses on the tubes form a transition curve which joins the body of the tubes of the noses.

51194. N. V. Koninklijke Pharmaceutisch Fabrieken v/h Brocades-Stheeman & Pharmacia. A process of manufacturing therapeutically active substances. Basic organic compounds are prepared by reacting an organic halide with a substituted alkanol amine.

51187. Ciba Limited. Process for improving the fastness to rubbing of dyeings and prints. The dyeing is after-treated with a reaction product of an α : β -alkylene oxide and an organic compound which contains at least one basic primary or secondary amino group or a basic

FEBRUARY 4.

51195. The Gold Mohur Mills Limited and C. Smith. Improved slub catcher for yarn winding machines. Comprising a plate having a yarn-gauging slot therein

closed at both ends the plate being provided with a second slot extending perpendicularly from first slot.

FEBRUARY 5.

51196. Void.

51197. Void.

51198. The Permutit Company Limited. Improvements relating to the manufacture of articles of ion-exchange resins. (February 11, 1953.) [Addition to No. 43943.] By polymerising a compound containing a polymerisable double bond and an acidic or basic group with a cross-linking agent and water to make the product water saturated.

51199. Knud Abildgaard-Elling. Method for producing salts, sparingly soluble in water, of penicillin esters. By mixing a solution of water soluble salt of the ester with solution of a salt of p-amino-sulphonic acid.

51200. Void.

51201. Council of Scientific and Industrial Research. Manufacture of picking band leather. Subjecting the pelts to a combination alum-oil-vegetable or vegetable-alum-oil tannage.

FEBRUARY 6.

51202. P. Reggiani. Improvements relating to springs of rubberised fabric in strip form. Impregnating a sheet of fabric with unvulcanised rubber compound, cutting the impregnated sheet into strips on the bias joining the strips from end to end an vulcanising the continuous length of joined strips.

51203. Cinetchnik A.G. Improvements in or relating to a process for hydrolysing cellulose acetate films with caustic soda lye. Adding to soda lye used for hydrolysing a condensation product of ethylene oxide with alkyl phenols.

51204. E. N. Ehrhart. Method of sugar refining. Treating a sugar solution of purity higher than 98.5 with carbon or with a hydrous inorganic compound separating the solutions from the solids and decolourising the solution with a hypochlorite.

51205. The English Electric Company Limited. Improvements relating to electric motor control systems. (February 13, 1953.) Comprises a variable impedance with control, means for initiating

deceleration and means for varying automatically according to payload.

51206. Titan Company A/S. Process for production of metallic iron concentrates and titanium dioxide concentrates from ores containing ilmenite. Ore mixed with sodium compounds is heated in presence of solid carbonaceous reducing agent.

51207. H. W. Burrington. Improvements in or relating to false-twisting devices. Comprising an electric motor, the motor spindle bearing a twister being provided with a bore through which the yarn is passed.

FEBRUARY 9.

51208. Sudhir Lal Mukherjee and Albert David Ltd. Improvements in or relating to the preparation of diethylaminoacet-2-m-xylylide. Reacting diethyl-aminoethylacetate with 2-m-xylylide in presence of metallic sodium.

51209. Void.

51210. Glaxo Laboratories Limited. Improvements in or relating to closures for bottles, jars, vials and like containers. A container, which comprises a shoulder within its neck and a stopper member disposed on the shoulder or seating, which stopper is flush with or lower than the top edge of the neck, is characterised by the provision of a disc of metallic foil adhesively secured to the upper surface of the neck.

51211. The Firestone Tire & Rubber Company. Improvements in or relating to tire building apparatus. Comprising collapsible building drum on cantilever shaft stitching means to turn extending tire piles around tire beads, pair of rings on each side of drum adapted to set beads against shoulders and means to pull said turned plies outwardly into cylindrical form.

51212. Colgate-Palmolive-Company. Dentrifrice composition. Comprising dextran.

51213. Colgate-Palmolive Company. Chlorophyll-polyvinylpyrrolidone preparations. Comprising chlorophyll and polyvinylpyrrolidone.

51214. Hercules Powder Company. Anti-knock motor fuel. Consists of fuel having dissolved therein 0.005 to 2% of bis (cyclopentadienyl) iron.

51215. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to

devices for recording sound oscillations in spiral grooves on a plate-shaped carrier. Circuits of the driving mechanism fed by control voltage to determine place of the cutter on the carrier for cutting, including circuit elements limiting control-range of the groove spacing both for high and small amplitudes.

51216. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De Saint-Gobain, Chauny & Cirey. Curved glazing sheets and processes and apparatus for their manufacture. Consisting heating the sheet to the softening point curving it and thereafter cooling it again heating non reserved part of it.

51217. Rotary Hoes Limited. Lifting arrangement for a power-propelled earth-working machine. Hydraulic piston cylinder arrangement and a screw operated device used independently for displacing ground engaging member support.

51218. Cognate with application No. 50328, dated September 24, 1953.

51219. Cognate with application No. 50022, dated August 4, 1953.

51220. Void.

51221. Void.

FEBRUARY 10.

51222. Void.

51223. Gelsenkirchener Bergwerks Aktiengesellschaft. Process and apparatus for briquetting fine grained ores. Ore is thoroughly mixed with fluid binding agents in a device capable of breaking up lumps, the temperature of the binding material being kept below the boiling point of water.

51224. G. Crespi. A method for forming the lining of walls, floors and roofs of metallurgical furnaces in general. Employing prefabricated blocks having such dimensions as to make it possible to compose said lining by associating together a few blocks.

51225. Kanegafuchi Boseki Kabushiki Kaisha. Method and machine for forming fibre laps. Pressing lap by press-roller by restraining the upward movement of the press-roller caused by the growth of the lap and releasing restraint and lifting press roller away.

51226. Stamicarbon N. V. Process for the continuous manufacture of phenol.

Circulating through reaction chamber a stream of solid reaction residue and continuously adding starting mixture thereto in amount to give a stream of solid material containing 10-50 per cent. by weight of starting mixture.

51227. Merk & Co., Inc. Antitubercular compositions. The composition comprises a compound having a labile ethylthio radical in a carrier.

51228. National Research Development Corporation. The production of titanium and like high melting point metals. (February 20, 1953.) Bringing in contact in a reaction zone under reducing reaction conditions separate continuous supplied of a halide of the high melting point metal and at least one metal of the group consisting of alkali and alkali earth metals.

51229. National Lead Company. Treatment of titanium metal. (June 13, 1953.) By contacting titanium metal with an acidic solution containing a soluble oxidizing agent having an oxidation reduction potential above that of standard hydrogen electrodes.

51230. H. Hodel. Resilient rail spikes prepared from rolled steel. The head of the spike is formed as a closed loop bent into a three dimensional curve symmetrical with respect to the shank and lying on both sides of the latter, the loop having two partial loops one on each side of the shank of which the ends running into each other form a bridge portion engaging the rail flange, the other ends being united to form the shank.

51231. Durand and Huguenin A.-G. Process for the manufacture of sulphuric acid ester salts of leuco vat dyestuffs of the anthraquinone series. [Addition to No. 44816.] Using insted of the mixture of bases specified, a mixture of 2-methyl-5-ethyl-pyridine with diethyl cyclohexylamine and/or one diethyl (monomethylcyclohexyl)-amine.

51232. Ferfogit Societa per Azioni. Polymerization of cyclic amides. A lactone is used as a reaction initiator.

51233. Anstalt Fur Die Entwicklung Von Erfindungen Und Gewerblichen Anwendungen Energa. Improvements in powder reactors for self-propelled projectile. Cylindrical reservoir containing self propulsion charge, and perforated metallic conical grid extending between charge and nozzles at the end of the reservoir, and enclosing at its narrowest

part an igniter; grid first heated burns by contact particles of charge passing towards nozzles.

51234. Union Carbide and Carbon Corporation. Improvements in and relating to the flame disurfacing of refractory metal bodies. (February 8, 1954.) A plurality of preheating flames are applied to surface of a portion of the body.

51235. Cannac Research and Development Company. Digestion of phosphate rock. (February 18, 1952.) Process for the recovery of tricalcium phosphate-product from rock phosphate by digestion with nitrogenous acid is characterised in that prior to its neutralisation with ammonia alkali metal salts are added in large amounts beyond that required for the precipitation of the fluorine content.

51236. E. Rosner. Improvements in or relating to burglar and like alarms. Comprising an electric bell of which the electric circuit includes a pair of contacts which tend to close but which are separated by an actuating member adapted to be pulled out by a wire or thread laid across a door or window to be protected.

FEBRUARY 11.

51237. B. A. Arakie. Improved smokeless fuel briquettes manufactured from solid fuels. The briquette consists of 80-92 per cent. of anthracite dust, anthracitic coal dust or soft coke dust, 7-15 per cent. of lime containing more than 60 per cent. CaO, and 2-5 per cent. of clay.

51238. Griffin Wheel Company. Method of reducing the melting time of a charge of ferrous metal or alloy thereof in metallurgical furnaces. A stream of oxygen and a steam of powdered metallic are simultaneously directed against the charge until the same has melted.

51239. N. V. Philips' Gloeilampenfabriken. Improvements in or relating to methods of manufacturing an isotropic permanent magnets having a preponderant crystal orientation in the [100] direction. Wherein models of magnets made from readily meltable materials are embedded in ceramic paste which solidifies, the latter being heated to melt the models and sinter the mould.

51240. N. V. Philips' Gloeilampenfabriken. Improvemnts in or relating to transistors. Consisting of two or more parts of different conductivity in which a certain amount of soldering metal is provided

on the outer surfaces of the thin part and at least one adjoining thicker part, the said metal and the thicker part being separated by a thin layer of the body which is of the same kind of conductivity as the thin zone.

51241. A. G. Desai. Improvements in or relating to digesters. Comprising a digesting vessel having a cage, surrounded by a jacket connected to a fire box and a chimney at the lower and upper end respectively and a siphon pipe with its one arm within the cage.

51242. Void.

FEBRUARY 12.

51243. The General Electric Company Limited. Improvements in or relating to electric incandescent filament lamps. (February 12, 1953.) Including within its envelope a substance which in normal operation gives out iodine vapour and metal parts including the filament, filament supports and filament supply leads such that they are substantially non-reactive with the iodine vapour.

51244. British Insulated Callender's Cables Limited. Improvements in or relating to extrusion apparatus. (February 25, 1953.) Fitted with a tubular mandrel for supporting an inner die in co-operative relation to an outer die to form an annular extrusion orifice.

51245. Stamicarbon N. V. Process and apparatus for separating mixtures of solids in a liquid medium. The open top of the vessel is at a higher level than the end of feed conduit.

51246. Norsk Hydro-Elektrisk Kvaelstofaktieselskab. Process of extracting potassium nitrate from diluted potassium-salt-containing solutions. Mineral acid added to mother lye being produced by passing aqueous chloride-containing solution through acid cation exchanger and ion-exchanger being regenerated by treatment with nitric acid.

51247. Wharton & Wilcocks Limited. Improvemnets relating to jigs and fixtures. (February 13, 1953.) Building up a jig by means of a plurality of interchangeable standard elements and tubes of square hexagonal or octagonal shape in cross section.

51248. Standard Telephones and Cables Limited. A contact spring assembly with interchangeable contact springs. Contact springs hold by action of tension of

three supporting points or surface of springs.

51249. Standard Telephones and Cables Limited. Improvements in or relating to intelligence storage equipment. (March 25, 1953.) Comprises a memory divided into storage section and a test section, recording and reading means and control circuit.

FEBRUARY 13.

51250. Council of Scientific and Industrial Research. A process for the manufacture of chrome-vegetable tanning extract. Reducing a mixture of sodium dichromate and sulphuric acid with vegetable tanning materials.

51251. Boots Pure Drug Company Limited. Acaricidal compositions. (March 2, 1953.) Containing compound of formula $C_6H_5(X)-S-CH_2(Y)-C_6H_5$ diluent or carrier, where X and Y are fluorine and chlorine atoms in any nuclei.

51252. Void.

51253. Aktiengesellschaft Fur Papier-Und Burobedarf. Metal-filled carbon paper and hectograph paper. (August 25, 1953.) The paper is produced from metal-filled base papers.

51254. H. W. Burrington. Improvements in or relating to wet spinning of polyacrylonitrile from salt solutions. [Divided out of No. 49428; ante-dated to April 22, 1953.] Wet spinning aqueous salt solutions of acrylonitrile polymers through a bath containing an organic peptizing agent for the polymer.

FEBRUARY 15.

51255. D. S. Roberts. Improved incandescent electric lamp with dual or stand by filaments. Multiple filament lamp with filaments connection to contacts on bulb-cap, two of the contacts being connected to electric supply line and on failure of one filament the lamp is taken out of the socket and one or more contacts on the bulb-cap are connected together so that a second standby filament comes into service.

51256. Void.

51257. S. S. Mavi, H. Singh, Dr. R. S. Dubey and Dr. D. N. Daruvalla. A process for the clarification of cane juice in the manufacture of white sugar. By adding to the juice a clay consisting of

(a) bentonite activated with sodium carbonate and/or (b) 'multani mitty'.

51258. Profulla Chandra Borua. Improvements in or relating to the preparation of a composition having therapeutic value. Trying green leaves of Akanda with common salt and powdering the product.

51259. Cognate with application No. 50136.

51260. Void.

51261. Ciba Limited. Manufacture of new pyridazone-(3)-compounds. Replacing substitute in 4-position of pyridazone-(3)-compounds by cyano group or condensing γ -oxo- α -cyanobutyric acid with hydrazines and oxidizing the resulting compounds.

51262. Ciba Limited. New 4-substituted pyridazone(3)-compounds and process for making them. In pyridazone-(3)-compounds which contain in 4-position a substituent convertible into carboxyl group the latter substituent is so converted.

51263. A. Hindle. Improvements in and relating to the manufacture of basic copper chloride and of copper-containing fungicides. Mixing cuprous oxide with a chlorine yielding compound in presence of water and exposing the mixture to reaction in atmospheric air.

51264. Simmonds and Stokes (Niphan) Limited. Improvements relating to electrical sockets and plugs. (February 24, 1953.) Provision has been made within the metal socket or plug casing of a tubular insulator enclosing the conductors and extending between the end of the cable entering the casing and the insulator block to which the conductors of the cable are connected.

51265. Wingfoot Corporation. Improvements in puncture sealing compositions. Mixture of rubber and active carbon.

51266. Wingfoot Corporation. Improvements in puncture sealing compositions. Mixture of butyl rubber and natural rubber or rubber-like copolymers of butadiene and styrene.

51267. Radio Corporation of America. Magnetic switching device. Half of the cores in each group are magnetically biased to substantial saturation of one of the polarity the other cores are magnetically biased to opposite polarity.

51268. Void.

FEBRUARY 16.

51269. S. S. Ponkshe and S. S. Ponkshe. Improvements in or relating to "Winnowing apparatus". Blower or fan element fitted within a casing having a hopper for screened stuff, rotary sieve or screen with cylindrical casing and screw for receiving feeding threshed stuff and drive element for rotating the blower or screen, the three units being structurally independent.

51270. Elektrophysikalische Anstalt Bernhard Berghaus. An improved lead-in for electric currents in gas discharge vessels. Having two concentric electrodes enclosing a gap lying in front of an insulator lying between the electrodes, one electrode or parts thereof being movable relative to the other electrode and can be fixed in position.

51271. Elektrophysikalische Anstalt Bernhard Berghaus. A process for carrying out technical operations in a glow discharge. The energy of glow discharge is increased in a predetermined part of the discharge space as compared with other parts of the discharge space by approaching two cathode drop spaces.

51272. Auto Transmissions Limited. Epicyclic power transmission mechanisms. (September 8, 1953.) The sun pinion, planet pinions and the annulus all provided with teeth of the helical type.

51273. A. C. Jason and F. Ansbacher. Improvements in electrical measuring devices. For measuring partial pressure of water or other vapour in its vicinity, comprising a first electrode bearing a porous layer of a dielectric which layer in turn bearing conductive vapour permeable deposit of graphite forming the other electrode.

51274. W. T. Glover & Company Limited. An improved electric resistance element. (March 11, 1953.) The element consists of a tubular metal enclosure, a central core of compressed granular resistance material and an intermediate insulating layer of compressed refractory powder.

51275. Glass containers (Medical) Limited. Improvements in or relating to glass ampoules. (July 16, 1953.) The ampoules is preweakened at the neck.

51276. H. J. Chapman & Company Limited. Improvements in printed or photographic reproductions. Translucent base with light transmitting printed on photographic matter on its front face, and at

least some of the same matters on the rear face on same scale and in register and a light transmitting backing which is also light absorbent disposed at the rear of said base.

51277. The General Electric Company Limited. Improvements in or relating to electric pulse distributors. (February 26, 1953.) Comprising means for generating a cyclic control wave having a period equal to the required recurrence period of the distributor, a phase shifting network and a pulse generator.

51278. Loewy Construction Company, Inc. Compensating means for fluid pressure operated presses under eccentric loading condition. Pair of fluid pressure generating units mounted on one of press platens and connected to common pressure resisting unit adapted to produce turning moment counter-acting tilting movement of the platen relative to predetermined axis.

51279. Mikhudi Brothers. Machine for breaking or crushing hard substances such as cast iron. Comprising spaced vertical columns, a vertical guide member fixed to each column, a sliding hammer engaging vertical guide member, a slider catching the hammer and means for topping the catch between hammer and slider.

51280. N. L. Modi and N. S. Rampery. A device for supplying fuel to carburettor type internal combustion engines. Ring shaped body to be fitted in fuel mixing pipe with spaced projecting vanes axis of which are bent away from axis of pipe.

51281. Void.

51282. J. H. Devine. Improvements in fasteners. Resilient element between fastener body, and holding members, has circumferentially spaced edgewise upstanding projections and the fastener body is composed of pivoted, collapsible and expensible counter parts having shank portions with toes and head portions having ledges engaging the projections on the resilient element.

51283. Didier-Werke A. G. Process for the thermal conversion of hydrocarbon-containing gases, of gaseous hydrocarbons and for gasifying oil. There is introduced into the process a hydrocarbon-free gas in such quantity as is necessary to complete the heat removal of the heated heat-exchanger.

51284. Didier-Werke A. G. Process for the gasification of coal dust. Coal dust is introduced into a reaction chamber with the addition of gasifying agents, and a portion of the gas produced is drawn off from the reaction chamber and is fed back into it.
51285. Ciba Limited. Process for the manufacture of methyl steroids. Δ^{14} 16-Keto-steroid is treated with a methyl magnesium halide in the presence of a coprous halide, the 16-keto-group is replaced by hydrogen and the resulting 14-methyl steroid is worked up.
51286. N. V. Philips, Gloeilampenfabrieken. Improvements in or relating to cylindrical anisotropic permanent magnets. Wherein the material consists of non-cubic crystals of polyoxides of iron and at least one of the metal Ba, Sr, Pb, principal directions for magnetisation being developed in moulding and the magnet being sintered.
- FEBRUARY 17.
51287. Siemens & Halske Aktiengesellschaft. Improvements in or relating to means for compensating temperature-dependent changes in the attenuation of a line. (December 14, 1953.) Comprises an adjustable line equaliser and a temperature equaliser included in the line path.
51288. Void.
51289. American Steel Foundries. Improvements in railway couplers. Pin-hole extends from top to bottom of the knuckle having an enlarged intermediate portion the surface of such enlarged portion adjacent the throat being closer to the longitudinal axis of the hole than remainder of such enlarged portion.
51290. American Steel Foundries. Improvements in a core structure for casting a railway coupler. Comprising a pin hole core and a tail core separable from and supported by such pin hole core.
51291. The Shawinigan Water and Power Company. Improvements in electrolysis of titanium tetrachloride. (September 22, 1953.) By maintaining in the fused salt bath a proportion of fluoride salt to provide between 0.02 % and 0.01% by weight of combined fluorine.
51292. Imperial Chemical Industries Limited. Improvements in the manufacture of polyester. (February 27, 1953.)
- Polycondensing bis (hydroxy-alkyl)- terephthalate in presence of antimony compound catalyst.
51293. Chas. Pfizer & Co., Inc. Improvements in or relating to therapeutic agents. Contacting a carbomycin antibiotic in solution with hydrogen in the presence of a hydrogenation catalyst.
51294. Durand & Huguenin A.-G. Process for the manufacture of salts of sulphuric acid esters of leucovat dyestuffs of the anthraquinone series. Vat dyestuff is treated in a mixture of dialkylformamide and methylene-bis (N:N-diethylcyclohexylamine) with chlorosulphonic acid.
51295. Orgryteverken Aktiebolag. Process and device for the treatment with liquid of woven fabrics. Wherein oscillatory motion is given to the heating liquid during the passage of fabrics therethrough.
51296. Gutehoffnungshütte Sterkrade A.G. Improvements in or relating to the local cooling of hot places in mines. Wherein an expansion turbine and a second prime mover are employed for driving a compressor which recompresses the expanded air.
51297. Creed and Company Limited. Electrosensitive recording blank. Comprising non-conductive sheet on which there is a electrically conductive coating of carbon dispersed in water-soluble binder, this coating having a surface stratum of varnish or lacquer resin with intermingled water-soluble binder and carbon, on which there is a thin coating of such character as to be disintegrated in elemental areas when subjected to electrical marking currents.
51298. E.F.G. Limited. Improvements relating to cigarette holders. Comprises a cylindrical tube portion and a flared end portion and a plug of fibrous filter material extending longitudinally of the tube.
51299. Duisburger Kupferhütte. Improvements in the separation of solids from liquids by sedimentation. (December 23, 1953.) A raking mechanism is provided in the lower portion of a further thickening zone.
- FEBRUARY 18.
51300. American Cyanamid Company. Process of granulating powder, granulated powders so produced and tablets produced from such powders. (May 13,

1953.) Mixing powder with a solution of non-toxic tacky gum and a volatile solvent in which the gum is soluble, and evaporating the solvent.

51301. Westinghouse Brake & Signal Company Limited. Improvements relating to apparatus for the regulation of the voltage across a common load circuit supplied from two or more sources of direct current. (March 31, 1953.) Comprises voltage regulating resistance bridges, transformers and rectifiers.

51302. Westinghouse Brake and Signal Company Limited. Improvements relating to apparatus for the regulation of the voltage across a common load circuit supplied from two or more sources of direct current. (March 31, 1953.) Comprises positive and negative input terminals, means for driving a second direct current potential and rectifier.

51303. A. Reyrolle & Company Limited. Improvements relating to high-voltage transformer units which are suitable for use as components in high-voltage switchgear. (February 25, 1953.) Primary and secondary windings, the magnetic cores and the terminal connections are all embedded in a moulded insulating block provided with a insulating bushing moulded integrally with said block and having a re-entrant orifice containing the associated terminal.

51304. Bengers' Limited. Improved therapeutic preparations of iron. (February 27, 1953.) Reacting a suitable partially depolymerised dextran with a solution or suspension of a ferric compound and excess of an alkali, pH of the solution being adjusted between 4.0 to 11.0.

51305. Dronsfield Brothers Limited and S. W. Dronsfield. Improvements in or relating to the stripping of pirns and the like. (October 10, 1953.) Feeding pirns to a support where the pirns are scraped by stripper elements and ejecting the pirn by a pusher element, the above operations being at regular intervals is timed relationship.

51306. G. H. Heetbrink and Dr. C. V. E. Baos. An indicator for determining the period during which a woman is capable of conceiving. Wherein the two cycle discs are each provided with an index indicating the end and commencement of the fertile period and also an adjustment disc located between the longest cycle disc and the base disc.

51307. S. M. Shamsie. Improvements in or relating to cocks. [Addition to No. 50793.] The improvement being that the valve spindle of the cock claimed in specification No. 50793 is spring loaded.

51308. C. T. Patira. Improvements in or relating to purses, pouches or the like. Comprising a base with flaps, two of the opposite flaps being made collapsible, the flaps on the other two opposite sides being adapted to overlap the collapsible flaps.

51309. Standard Telephones and Cables Limited. Improvements in or relating to electrical information storage arrangements. (March 20, 1953.) Comprises a number of stores in which are associated recording and reading means.

51310. Standard Telephones and Cables Limited. Improvements in or relating to intelligence storage equipment. (March 20, 1953.) Comprises first and second recording means and a control circuit.

51311. Standard Telephones and Cables Limited. Improvements in or relating to equipment for performing a complex sequence of operations. (March 20, 1953.) Comprises a store, reading means and control circuits.

FEBRUARY 19.

51312. Void.

51313. S. R. Subba Rao. Kannada typewriter key board. Keys provided with the vowel 'gudisu' attached consonant characters as base characters.

51314. Dunlop Rubber Company Limited. Improvements in or relating to machine belting and the manufacture thereof. (February 24, 1953.) A combination of woven duck fabric or herringbone twill weave and a polyvinyl composition.

51315. Dunlop Rubber Company Limited. Impregnation of textile materials. Treating a textile cord containing a phenol with an aldehyde.

51316. Imperial Chemical Industries Limited. New and improved ester-salts of phosphoric acid. (April 24, 1953.) Reacting an alkyl-p-tertiary octyl phenyl hydrogen phosphates with an amine.

51317. Imperial Chemical Industries Limited. Improvements in or relating to blasting charges. (April 30, 1953.) Wherein the blasting composition compress ammonium nitrate 55-75 per cent and calcium formate 45-25 per cent.

51318. British Insulated Callender's Cables Limited. An improved means for supporting overhead traction conductors. (April 14, 1953.) Of the type in which a loop of metal strip has parallel sides joined at their upper ends by a semi-circular portion and provided at their lower ends with inwardly turned tips fitting into grooves of the contact wire, the semi-circular portion being adapted to ride over the catenary cable.

51319. Klockner-Humboldt-Deutz A.G. A method of smelting ore, particularly iron ore. (February 2, 1954.) Ore is formed to briquettes together with caking coal suited to be carbonised at low temperature together with limestone, the height of the charge column is maintained between 2 and 6 m. counted from the plane through the tuyeres.

51320. Yardney International Corp. Improvements in or relating to electric batteries. (February 20, 1953.) Of the type wherein a diaphragm of semi-permeable material separating the electrochemically active materials of opposite polarity comprising the electrodes is maintained under compression and is impregnated with an electrolyte comprising alkali metal hydroxide saturated with zinc.

51321. C. A. Parsons & Company Limited. Improvements in and relating to heat exchangers. (February 20, 1953.) [Addition to No. 49438.] The corrugated sheet dividing the flow channel of each cell is formed by corrugating the flat sheet separating the two cells.

51322. T. M. M. (Research) Limited. Improvements in roller-gill textile drawing frames. (February 24, 1953.) Comprising spaced sets of roller feed elements and roller drawing elements, a pin-roller (or porcupine) mounted between said sets of elements.

51323. A. Sanghi. Improvements in or relating to tubewell. The tubewell pipe has slotted portions at intervals along its length the slotted portions being surrounded by layers of filtering medium in cups fitted spacedly on the pipe, the gravel being of different sizes in each layer.

51324. Void.

FEBRUARY 20.

51325. The English Electric Company Limited. Improvements relating to

engine-electric transmission systems. (February 27, 1953.) Excitation of separately excited field winding in parallel circuits of engine driven direct current generator varied automatically in accordance with load current of generator; currents in parallel circuits automatically maintained equal.

51326. The Distillers Company Limited. Purification of penicillin. (March 7, 1953.) Dibenzylethylenediamine penicillin is suspended in a mixture of water and water immiscible organic solvent.

51327. British Celanese Limited. Improvements in the manufacture of organic substances of very high molecular weight. (March 24, 1953.) Rapidly and intimately mixing unsupported streams of solution and of a precipitant.

FEBRUARY 22.

51328. M. A. Chaudary. Improvements in and relating to treating fibres. Impregnating fibres with the composition claimed in Patent Specification No. 49235.

51329. Colgate-Palmolive Company. Stabilized anti-perspirant cosmetic cream. The cream comprises a perspiration inhibitor, an oil phase, an aqueous phase, an emulsifying agent and a polypropylene glycol as stabiliser.

51330. T. M. M. (Research) Limited. Improvements in the drafting apparatus of textile spinning and like machines. (February 27, 1953.) The upper drafting elements being mounted upon the upper surfaces of the pivotal arms and being loaded through the medium of an auxiliary arm.

51331. Boots Pure Drug Company Limited. Acaricidal compositions. (March 2, 1953.) Preparing by oxidising $C_6H_5(X)-S.CH_2C_6H_5(Y)$ with H_2O_2 in acidic medium.

51332. Polygram Casting Co. Limited. Improvements in methods of and apparatus for producing shell moulds (February 26, 1953.) Exerting, on the outer surface of two adhesively mated halves of the mould, pressure through the intermediary of a gas or liquid.

51333. Ciba Limited. Manufacture of new piperidines. Substituted 2-(thienyl-2'-methyl) piperidines are prepared by known methods starting from the corresponding pyridine compound or from a suitable piperidine compound containing

a carboxyl group or a free or esterified hydroxyl group.

51334. Ciba Limited. Manufacture of new products related to aldosterone by enzymatic oxidation. Saturated or unsaturated 3:18:20-trioxygenated pregnene compound or derivative thereof is subjected to the aerobic action of an enzyme which is known to introduce oxygen in the 11-position.

51335. Ciba Limited. Manufacture of new pregnenals and derivatives thereof. Reacting a quaternary 3:18-dioxygenated 20-ozo-jregnane-20-yl-ammonium compound with an organic nitroso-compound and the resulting nitron is transformed by hydrolysis into the corresponding aldehyde.

FEBRUARY 23.

51336. Void.

51337. Bholanath Ghosh. An automatic tea sorting and upgrading machine. Comprises a hopper with two adjustable blades attached to a crank and an adjustable handle, a set of hammers and cams mounted on respective shafts and a conveyor belt having a hairy cloth attached on it.

51338. The Dow Chemical Company. Improvements in or relating to method of producing eletroplates of nickel on articles of magnesium and magnesium-base alloys. The magnesium or base alloy is subjected to the action of a fluoride.

51339. British Cellophane Limited. Improvements in or relating to the production of films of non-porous, non-fibrous materials. Bringing a pair of dry films into intimate contact to form plies of a single web, coating this web on both sides with a coating and finally separating the two plies of the coated web.

51340. H. M. Yeatman. Improved portable water heater for use with flat-topped cooking stoves. (March 4, 1953.) A pipe assembly from a water tank is placed when desired on a heating stove.

51341. Ciba Limited. Manufacture of amides. Reacting carboxylic acid esters having in the alcohol component an electrone attracting substituents with organic amines.

FEBRUARY 24.

51342. Rolladenfabrik A. Griesser A.-G. Improvements in or relating to venetian

blind. When a wheel and two pawl device is provided on winding shaft arranged to lower or raise the blind with cooperation of one or the other pawl.

51343. A L W E G-Forschung-Gesellschaft mit beschränkter Haftung. Supporting structures, more especially for monorail systems. Hollow supporting member of armoured or prestressed concrete bearing upon bases or pylons.

51344. The English Electric Company Limited. Improvements relating to dynamo-electric machines. (March 6, 1953.) Void after publication. Two of the three phase secondary winding connected to a common slip-ring and remaining four phase ends connected to a separate slip-ring.

51345. H. Chen. Improvements in and relating to portable water heaters for use with flat-topped cooking stoves. [Addition to No. 51340.] A receptacle is provided within the water containing tank.

51346. Dipl.-Ing. A. Kreidler. Improvements in or relating to motor cycles. In telescopic forks same means are used for connecting upper traverse to vertical tube and for fixing steering rod.

51347. Marchon Products Limited. Improvements in or relating to powders. (February 25, 1953.) Void after publication. A polyborate and a heat stable material are heated such that the fine product contains water of crystallisation in the range 0.5 to 1.5 H₂O to B₂O₃, and has a bulk density lower than the mean of the bulk densities of the individual components of mixture.

51348. E. Kiefer. Expansible link-construction for bracelets and chains. Extendible inner links are provided on their inside with a springy sheet metal layer.

51349. E. C. E. Hemsted. Improvements in the preparation of soluble fibrous materials having prophylactic and/or therapeutic properties. (December 30, 1952.) [Divided out of No. 49940; ante-dated to July 20, 1953.] Includes the step of felting or matting the fibres on a vibratory surface.

51350. E. C. E. Hemsted. Improvements in and relating to tampons, wads or the like, and materials therefor. (December 19, 1952.) [Divided out of No. 49940; ante-dated to July 20, 1953.] Wherein preformed length of fibrous mass is

encased in preformed film or sheet of soluble or dispersible material.

FEBRUARY 25.

51351. J. Wolfinger. Remote control system. An impulse sender is arranged in each of the remote control stations and operable to transmit an impulse signal specific to the station.

51352. Void.

51353. V. R. Barve. A cheque-writer and/or addressograph. Consists of two essential parts, a basic holder for these rings and the characteristic rings.

51354. Estirajes Balmes, S. A. Improvements in the drawing mechanisms of spinning and preparing machines. All or some of upper rollers of drawing mechanism actuated to and fro in the direction of roller axis in synchronism with transverse to and fro motion of rovings so as to maintain zone of contact with rovings the same.

51355. United States Steel Corporation. Method and apparatus for continuously processing strip. Comprises means for centering the strip prior to its entry into processing equipment and plurality of rolls for supporting said strip, each of said rolls having cylindrical strip supporting surface of less width than the width of the strip.

51356. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to method of joining heavy work-pieces. Seam is enclosed with auxiliary pieces so as to prevent welding metal from laterally flowing away, and holding and moving a coated welding were in the seam so as to cause an arc to burn between the bottom of the seam and the extremity of the welding wire.

51357. N. V. Philips' Gloeilampenfabrieken. Improved method of producing trichlormethylpara-acetylaminobenzene-thiosulphonate. Treating alkaline metal salt of para-acetylaminosulphinic acid with perchlormethylmercaptan.

51358. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electric lamps. Head is provided below the edge of the cap with a recessed groove and an adjacent thickened portion within the cap.

51359. Prof. Dr. T. Reichstein. Manufacture of 18-oxygenated steroids. [Cognate with application No. 51520 dated

March 17, 1954.] Halides of 3-oxygenated steroid-17-carboxylic acids are reacted with diazomethane, a hydroxyl group is introduced into the 21-position of the compounds obtained.

51360. Prof. Dr. T. Reichstein. Process for the synthesis of steroids. Saturated or unsaturated polyhydrophenanthrenes are intramolecularly condensed.

FEBRUARY 26.

51361. K. P. Bhawe. Improvements in or relating to pedal attachment for velocipedes and like vehicles. The pedal is attached to the pedal arm through the intermediary of an U-clamp.

51362. Rheinpreussen Aktiengesellschaft für Bergbau und Chemie. A process for the production of hydrocarbons and oxygen-containing organic compounds. (July 21, 1952.) [Divided out of No. 48307; ante-dated to October 27, 1952.] Carbon monoxide water vapour mixture being contacted with the catalyst at a space velocity which is not less than nine times the numerical value of the synthesis pressure.

51363. Rheinpreussen Aktiengesellschaft für Bergbau und Chemie. A process for the production of hydrocarbons and oxygen-containing organic compounds. (July 21, 1952.) [Divided out of No. 48307; anti-dated to October 27, 1952.] The molar ratio of CO/H₂O is within the limits 2:1 and 3:1.

51364. D. Napier & Son Limited. Transmission gearing including means for measuring torque. (February 27, 1953.) The reaction member forms with a fixed member an annular or part annular chamber coaxial with the sun wheel and means for measuring fluid pressure.

51365. Austin Crompton Parkinson Electric Vehicles Limited. Improvements relating to weighing mechanism. (April 27, 1953.) Incorporating two pendulum resistants and two separate equal levers lying one above the other, fulcrummed at opposite points and linked to each other in a way to prevent rocking thereof in same direction.

51366. Alweg-forschung-Gesellschaft mit beschränkter Haftung. Improvements in or relating to means of transportation. A beam-shaped monorail track, a conventional two-rail track and a transition portion, on which the monorail track is

flanked by the two rails of the conventional track.

51367. The Chloride Electrical Storage Company Limited. Improvements in lead acid electric accumulators. (March 17, 1953.) Of the type in which the positive plates are built up from a lead alloy grid having spines extending between top and bottom bars, with slitted tubes of ebonite or the like which are filled with active material around the spines.

51368. Chloride Electrical Storage Company Limited. Improvements in terminal arrangements for electric accumulators. (March 17, 1953.) In which a post passes through a side wall of the cell case and is connected by an external link with an independently anchored terminal which may be upon the top or other part of the battery.

51369. Chloride Electrical Storage Company Limited. Improvements in accumulator grid alloys (December 23, 1953.) Containing antimony, arsenic copper tin and lead.

51370. Monsanto Chemicals Limited. Improvements relating to the production of polyethylene. Polyethylene having a molecular weight of 18,000—46,000 is obtained by exposing ethylene to the action of δ -rays.

51371. E. C. E. Hemsted. Improvements in and relating to tampons, wads, filtering materials and the like. (February 27, 1953.) Comprising a fibrous material loaded with an ion-exchange agent, through which the liquid is passed.

51372. G. Heussner. Improvements in and relating to half-tone printing blocks (February 27, 1953.) With a layer of transparent colloidal material superimposed upon a second, thin light-sensitive layer of colloidal material containing pigment of a nature and concentration such that light, when a photographic negative is printed onto, reaching the second layer from areas of large dot diameter penetrates further than light reaching it from areas of small dot diameter.

51373. Ing. Giovanni Radio & Co., S.P.A. A process for the execution of deep excavations for wells and trenches by the circulation of mud sucked through an excavating shoe. Excavation is effected by bringing to the surfaces the ground carried along by an active cir-

ulation of digging and mud introduced into trench and sucked up through a terminal bottom breaking shoe.

FEBRUARY 27

51374. L. Leslie-Smith. Improvements in or relating to vacuum flasks and the like. An auxiliary container is secured to the flask container.

51375. J. F. Russell, Jr. Liquid dispensing machine. (February 28, 1953.) Comprising in combustion a housing, a support assembly within said housing carrying a number of cups, releasing means for cups, a dispensing valve controlling outlet of a liquid container, metering means responsive to quantity of liquid.

51376. Ferfogit Societa per Azioni. Low speed feeding thread storing thread advancing device comprising an idle advancing roller. Having two rollers with axis askew to one another characterised in that idle roller is divided into two independent portions.

51377. Stamicarbon N.V. Method of separating a mixture of solid particles into fractions by means of a hydrocyclone. Wherein the separation is effected with a hydrocyclone positioned with its axis making an angle of 45° or more to the vertical.

MARCH 1.

51378. Dr. H. Morr. Highly porous electrodes for galvanic elements. Electrode is formed of a rigid-foam framework consisting of at least one foamable and unoxidisable synthetic plastic.

51379. Void.

51380. Void.

51381. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to the production of phenthiazines. (April 8, 1953.) A diphenyl sulphide orthosubstituted in one ring by an amino group and in the other ring by a halogen atom, is heated in the presence of an acid binding agent and in an anhydrous solvent.

51382. Societe Des Usines Chimiques Rhone-Poulenc. Process for the production of N-substituted phenthiazines. (April 8, 1953.) [Addition to No. 51381.] A diphenyl sulphide O-substituted in one ring by an aminoalkylamino group and in the other ring by a halogen atom in an anhydrous solvent.

51383. Edwin Danks and Company (Oldbury) Limited. Improvements in apparatus for controlling the operation of mechanical stokers. (March 5, 1953.) Providing common control means to effect such regulation both of the rate of supply of fuel and the rate of supply of air to a furnace chamber to maintain a suitable ratio between the two.
51384. Imperial Chemical Industries Limited. New thiobarbituric acid derivatives. (March 20, 1953.) Reacting a compound of the formula $R_1-C(COX)_2$ with $R_3NHCSNHR_1$ or with R_2-
 $R_3-NH.CS.NHR_1$, R_1 being a phenyl, R_3-
 R_3-
 alkyl or alkenyl radical, R_2 being an alkyl or alkenyl radical and R_3 , R_4 being methyl or ethyl radical.
51385. Ercole Marelli & C. Societa per Azioni. Improvements in electric fans for ceilings with particular reference to the motor construction system. The lamination or pack of magnetic iron sheet constituting the stator forms one single body with the suspension shaft by means of a bush cast direct on the two pieces so as to render the whole indivisible.
51386. Pilkington Brothers Limited. Improvements in or relating to the manufacture of electrical resistances for domestic heating. (March 2, 1953.) Spraying molten resistance material on an insulator, applying a resist over it through a silk-screen, chemically removing the uncoated metal and then removing the resist.
51387. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of derivatives of meta hydroxy aniline. Quarternizing a tertiary amine of the formula
- $$\begin{array}{c} R_1 \\ | \\ OR-C_6H_4-NH-CO-C-A \\ | \\ R_2 \end{array}$$
- wherein R is benzyl or an acyclic hydrocarbon radical, R_1 and R_2 represent hydrogen or acyclic hydrocarbon radical and A is fatty substituted trivalent nitrogen atom.
51388. Dansmidth Corporation. The Conveying apparatus. A body of pulverulent material is continuously maintained within a vessel from which a transport conduit leads the conduit having an intake open to the material and air being rendered fluent by a stream of air.
51389. Void.
51390. W. Lindsay. Improvements in or relating to tea rolling machines. Rolling table having a drop type, discharge door and discharge door operating gear which has means whereby the door may be operated under perfect control at all stages of opening or closing the discharge aperture.
51391. W. Lindsay. Improvements in or relating to tea rolling machines. Having a discharge aperture offset from its centre, a sliding and rising door for closing the aperture and a discharge door operating gear controlled by a screw shaft rotated by a hand wheel.
51392. Void.
51393. Void.
- MARCH 2.
51394. Void.
51395. The General Electric Company Limited. Improvements in or relating to electric signalling systems of the kind using pulse code modulation. (March 5, 1953.) Including first and second integrating circuits and means to generate train of pulses which decrease in geometric progression with a common ratio of one half.
51396. The General Electric Company Limited. Improvements in or relating to apparatus for comparing the instantaneous values of two voltages. (March 5, 1953.) In which a control voltage depending upon the difference between the instantaneous values of the voltages to be compared, is derived and applied to responsive means.
51397. The General Electric Company Limited. Improvements in or relating to apparatus responsive to the frequency of alternating currents or speed. (March 16, 1953.) [Addition to No. 47151.] Comprising an alternative current tachometer generator arranged to be driven at a speed dependent upon a speed or frequency to be determined, two resonant circuits arranged to be connected to the tachometer generator.
51398. The General Electric Company Limited. Improvements in or relating to crystal triode circuits. (March 17, 1953.) Crystal triodes connected in push-pull, the emitters are so biased that relatively high emitter currents

flow in quiescent state and the collector electrodes are fed with current from a constant voltage source via separate inductors and resistors.

51399. The British Iron & Steel Research Association. Electro-deposition of iron-zinc alloy. The bath includes a salt to act as a buffer and a substance to prevent precipitation of ferric hydroxide.

51400. S.I.S. Societe D'Investissements Collectifs. Juice extracting and pulp making process. Subjecting the material to a mechanical disintegration, dispersing the fibre containing substances, compressing them and separating therefrom the solution of non-cellulosic components.

51401. Ashley Accessories Limited. Improvements in or relating to ceiling roses. (April 10, 1953.) Consists of a contact receiving part to having inverted arches or bridges of a particular shape.

51402. Frawley Manufacturing Corporation. Cam type retractable mechanism for a writing instrument. Slidably mounted longitudinally and including downwardly directed project position shoulder and a retract position face in separate planes spaced longitudinally of the said body.

51403. O. Kendall. Improvements in or relating to sound recording and reproduction. Comprising producing representation of sound determining envelope contour of a desired progression of amplitudes of sound, variably controlling or deleting said representation until the residue thereof conforms to said envelope contour and recording said residue upon a medium adapted for reproduction.

51404. Standard Telephones and Cables Limited. Radio frequency filter. (Addition to No. 47486.) Including a first conductor and a second conductor disposed in parallel spaced relation to the first conductor, the configuration of the first conductor presenting, in conjunction with the second conductor, inductance and capacitance to form a resonant filter section.

51405. B. B. S. Jensen. Method for producing adrenal cortical hormones. (March 3, 1953.) Void after publication. Growing *Aspergillus sulphureus* in a fermentation medium, adding a steroid compound having a methylene group in the 11-position and continuing fermentation until oxygenated in the 11-position.

MARCH 3.

51406. Simon-Carves Limited. Improvements relating to sink-and-float coal or ore washing plants. Comprising a bath to which raw material is added, vertical dirt wheel for removing sinks and means to travel floats across the bath.

51407. The National Smelting Company Limited. Improvements in or relating to zinc smelting. (December 30, 1953.) [Addition to No. 43310.] Oxygen or oxygen-enriched air is introduced through a pipe into the blast furnace gases accumulating in the space above the level of the charge.

51408. Societe Des Acieries De Pompey. Process of manufacturing low alloy steel and steel articles made from said steel, in particular oil wells tubing. By subjecting steel containing in addition to carbon and iron, silicon, aluminium, chromium and manganese to a heat treatment comprising an austenite forming step followed by atmospheric cooling and long tempering or annealing at 500—700°C.

51409. Wingfoot Corporation. Improvements in tires. The body containing a plurality of plies of vulcanisable rubbery composition reinforced with continuous filament cords incorporated therein.

51410. Edwin Danks and Company (Oldbury) Limited. Improvements in control systems for mechanical stokers. (March 5, 1953.) Control system for furnace provided with a mechanical stoker having a stoker speed control means and a forced draft fan means, the stoker speed, control means are arranged automatically upon the stoppage of the forced draft fan means.

51411. International Minerals & Chemical Corporation. Improvements in or relating to production of ammonia and sulfur bearing materials from ammonium sulfate. A metal oxide is mixed with a sulphate of ammonia and the mixture progressively heated to higher decomposition temperatures.

51412. American Cynamid Company. Improvements relating to new monothiophosphate esters and to miticide compositions containing same. (November 9, 1953.) Oxidising a O, O-dialkyl S- (1, 2-dicarbalkoxyethyl) dithiophosphate ester.

51413. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating

to electrode systems comprising a semi-conductive electrode secured to a support sealed in a glass envelope. Portion of the support of semi-conductive electrode located inside the glass envelope having at least one portion which is thicker than the part sealed in the envelope.

51414. Hemphill Company. Improvements in or relating to methods of knitting on circular independent needle, knitting machines. (May 21, 1953.) Including the steps of selecting one or more needles by means of one stitch cam and with other needles only by another stitch cam on a single passage of said needles past the said cam.

MARCH 4.

51415. Void.

51416. Standard Telephones and Cables Limited. Directive radio antenna arrangement. (March 5, 1953.) Rotatable antenna array unit of small aperture and including N spaced antennae and a stationary unit surrounding said array unit of $2N$ energy-guiding channels uniformly spaced round the arc of rotation of the array unit, each channel having an end adjacent the array unit and another end for energy transfer with free space.

MARCH 5.

51417. Herbert Morris Limited. Improvements in lever pull-hoists. (April 7, 1953.) End of operating lever terminates in a ring having two-way ratchet teeth engageable by a double ended pawl pivotally mounted and adapted to co-operate also with a segmental wall of the driven member.

51418. Addison & Co., Limited. Improvements in or relating to compression sprayers. Provided with a constant pressure valve which comprises of a chamber having a fluid inlet closed by a spring loaded valve, the chamber having a wall formed by a diaphragm.

51419. Dipl. Ing. A. Kreidler. Improvements in or relating to ratchetwheels. An elastic driving ring with clamping rollers gives rise to a friction grip to couple the driving element to the driven element.

51420. General Electric Company. Improvements in or relating to multiple concentric electrode gap construction for lightening arrester. Comprises a

plurality of spaced concentric annular electrodes disposed in a shallow arc chamber.

51421. Standard Telephones and Cables Limited. Improvements in or relating to diversity reception arrangements for radio waves. (April 22, 1953.) Comprising means for coupling all the antennas to the radio receiver, including phase-shifting means, which are so adjusted that the power supplied to the receiver is a maximum which is not less than the power which would be supplied by that antenna receiving the greatest power, when all the others are out of action.

MARCH 6.

51422. Diamond Alkali Company. Production of parachlorophenyl parachlorobenzene sulfonate. Reacting excess of chlorosulfonic acid with monochlorobenzene at a temperature below 10°C .

51423. Bishop David Freeman Co., and Davis Press Pad Co. Apparatus for pressing garments. A steam distributing plate is provided with a plurality of passages for the flow of steam so constructed that the jets of steam will be deflected and diffused in such manner as to be emitted from the plate in the form of diffused clouds.

51424. The Griffin Engineering Company (Proprietary) Limited. Earth or rubble dam for dikes and barrages. Dam with shield of reinforced concrete embedded in wall parallel with its length, and constructed in sections articulated together.

51425. National Malleable and Steel Castings Company. Improvements in or relating to a friction wedge member for a car truck. Friction wedge provided with a projection for engagement with guide lug of an associated bolster.

MARCH 8.

51426. M. Coccon. Automatic device for a typewriter for determining the distance between a predestinated point and the typing line. Comprising a screwed shaft connected to wheel works, a female threaded sector engaging the shaft and a guide rod for the sector, the guide rod being supported by paper pressing rod.

51427. Void.

51428. Void.

51429. Void.

51430. Wingfoot Corporation. Improved rim assembly for vehicle wheels. Having outer rim mounting surface concentric with wheel centre peripherally extending groove thereon and rim having inwardly extending locating portion, split ring having inwardly extending leg to seat and align against each other with clamping means.

51431. Wingfoot Corporation. Improved valve assemblies and pneumatic inner tubes made therefrom. Valve rubber part comprising 0.25% to 50% of polychloroprene and 99.75% to 50% of copolymer of iso-olefin and multiolefin.

51432. Wingfoot Corporation. Puncture sealing compositions and the use thereof in pneumatic inner tubes and tires. Including mixture of from 60% to 10% by weight of rubber like copolymers of an iso-olefin and multiolefin, and 40% to 60% of butadiene and styrene.

51433. Lummus Cotton Gin Company. Method and apparatus for separating trash from an airborne stream of fibrous material passing through a duct. Comprising a housing surrounding a portion of lint flue and having an opening for trash to be discharged, a constricted passage in the lint flue, means to maintain the lint flue under super atmospheric pressure, means to admit air and means to remove the trash.

51434. SNIA VISCOSA Societa Nazionale Industria Applicazioni Viscosa. Process for the preparation of cellulose from sugar cane waste. Vegetable material is subjected to moderately alkaline treatment, subsequently an alkaline cooking and finally a bleaching.

51435. Ferguson Pailin Limited. Improvements relating to cartridge-type fuse-links. (March 9, 1953.) Resistance wire in a recess in the cartridge heats up paper covering the recess the said paper being loaded with slow-burning non-explosive substance.

51436. Schlumberger Well Surveying Corporation. Induction logging apparatus for investigating the electrical conductivity of earth formations. Including transmitter coil means mounted for movement in proximity to some earth formations, receiver coil means disposed in fixed relation to the transmitter coil means for inductive coupling therewith.

51437. S.I.S. Societe d'Investissements Collectifs. Constant pressure pulp presses. A vertical cylindrical perforated casing, a conical spindle, a cylindrical skirt depending from said spindle, a conical frustrum with a coaxial opening, said spindle being slidably sleeved upon said skirt and an annular member between the housing and the lower edge of the casing.

51438. The Vitarama Corporation. Camera with film holders for convenient loading. Having a separably coupling for transmitting power from motor to magazine assembly, so arranged that it can be assembled only when its separable parts are in such predetermined relationship of angular rotation with respect to each other that mechanisms of magazine will be properly synchronized to cooperate with mechanisms of the camera body.

51439. Void.

MARCH 9.

51440. National Lead Company. Improvements in or relating to fire resistant cloth and a method and solution for producing the same. By impregnating the cloth with an aqueous solution of halide salt of tetravalent titanium, gelatinizing, and alkalizing with an alkaline neutralizing agent.

51441. Nagri Mining Company, Limited. A drum for cleaning stones, ores, and the like. Arranging rolled metal profiles so as to form a drum of circular shape, one member of each projecting inside the drum.

51442. Frederick Parker Limited and F. W. Parker. Improvements relating to driers for fluent solid material and to mixing plants including such driers. (March 10, 1953.) The feed means and discharge means rotate with hollow drum in which the material is dried.

51443. International Combustion Holdings (Limited). Improvements in or relating to ash removing apparatus. (March 13, 1953.) Framework supporting a plate capable of limited movement with respect to the framework and means for oscillating the plate.

51444. A. N. Spanel. Hair cutter. [Addition to No. 45487.] A guard is mounted on the blade-position, fixing means and forms an obstacle against accidental contact with the edge of the blade.

51445. Patentes Talgo, S.A. Improvements in or relating to railway trains. (January 18, 1954.) A supporting two-wheel running gear for each car located close to its pivoted end and a steering mechanism for the running gear of each car detachably connected to the other car.

51446. Void.

51447. Ciba Limited. Process for the reduction of steroid compounds. By reduction of steroid-14:16-diene with nascent hydrogen.

51448. Prof. Dr. T. Reichstein. Process for the synthesis of steroids. By introducing a substituent β -oxygenated propyl group in position 2 of dodecahydronaphenanthrene-4- β -ol-1-one, introducing in position 1, a radical capable of being condensed to form a 6-ring, cyclising, splitting between carbon atom 16 and 17 and then cyclising.

51449. Prof. Dr. T. Reichstein. Process for the manufacture of hydrophenanthrene compounds. By treating a corresponding hydrophenanthrene compound with an alkali metal in the presence of a nitrogen base and an alcohol and hydrolyzing the resulting product.

MARCH 10.

51450. Void.

51451. Schweizerische Lokomotiv- und Maschinenfabrik. Improvements in or relating to progressively adjustable friction gears. Friction discs of the feed shafts are divided in systems of two or three groups of discs equi-angularly disposed along a circle.

51452. Imperial Chemical Industries Limited. Improvements in or relating to gas operated diaphragm delivery pumps. (June 12, 1953.) Diaphragm portion separates the liquid collecting chamber from the gas collecting chamber and a distribution valve permits delivery of intermittent supply of gas.

51453. E. I. Du Pont de Nemours and Company. Textile printing. Printing textiles with vat dyes over printing with an aqueous paste of caustic alkali and alkali metal hydrosulphite, steaming oxidising and finally soaping.

51454. Procter & Gamble de Mexico S.A. de C.V. Improvement in detergent products for domestic use. Detergent containing a mixture of sulfonate or sulphate synthetic detergent a phosphate and a phthalocyanine pigment.

51455. W. H. Minor, Inc. Rubber cushioning units for shock absorbers for railway draft rigging. A pair of metal plates with a rubber pad interposed and bonded to the latter and having a concave peripheral edge.

51456. Compagnie Generale De Telegraphie Sans Fil, E. Honore, E. Torcheux and G. G. J. Cordier-Roy. Improvements in or relating to variable capacitors and method of producing same. (March 13, 1953.) Comprises two coaxial cylindrical sleeves one being slotted and having conductive coatings to serve as electrodes one movable in relation to the other.

51457. A. Magnani. Process for the manufacture of fibrocement pipes. Wherein the pipe is compressed as it is wound by at least one roller coated with rubber acting throughout the pipe length.

51458. Ferguson Pailin Limited. Improvements relating to cartridge type fuse links. (March 27, 1953.) Cartridge type fuse-link having offset terminal tags.

51459. Ferguson Pailin Limited. Improvements relating to cartridge type fuse links. (March 27, 1953.) End-plate formed with a single hole for a set of fuse members, the terminal tag for that plate bridging the hole.

MARCH 11.

51460. Courtaulds Limited. Improvements in and relating to copolymeric products. Copolymerising an acrylonitrile with an aryl sulphonic ester of an unsaturated alcohol and reacting the product with ammonia or an amine.

51461. H. W. Burrington. Device for automatically adjusting illumination for photographic or cinematographic cameras. Comprising photoelectric cell, two polarising screens and means for varying relative angular position of the screens according to the current produced by the photo-cell as a result of light being incident thereon.

51462. The General Electric Company Limited. Improvements in or relating to glass compositions and glass-to-metal seals. (March 17, 1953.) Composition having silica, alumina, boric oxide, sodium oxide, potassium oxide, calcium oxide, zinc oxide, barium oxide, lead oxide and fluorine.

51463. Inflico Incorporated. Improvements in or relating to slurry type

liquid treating apparatus. Comprising a tank, a conduit in communication with the mixing and reaction chamber and extending outwardly therefrom across a lower portion of the tank, means for discharging liquid downwardly from the conduit over the bottom area of the tank and means for driving a rotor in said chamber and for rotating the conduit.

51464. M. Floro. Improvements in or relating to rotary dryer. A heated chimney is located within the drying drum.

51465. Dr. Ing. C. E. Westphal. A receptacle or bunker for transporting materials. Receptacle of circular cross section to be self trimming carries mounting pins at its ends the axes of the pins lying in a plane between the centre of gravity of the loaded receptacle and the centre of gravity of the empty receptacle so that when the loaded receptacle is supported on the pins it automatically discharges itself.

51466. T. H. Nakken. Photographic objectives. Including at least one negative front lens means and one positive rear lens means in co-operation, the aggregate equivalent monocular viewpoints for objects and interspaces created thereby being located at distances to the rear and in front of the lens means forming the final images of objects in the field of view of the objectives, said distances being comparable to the distances of equivalent monocular viewpoints from eye base viewing same objects and interspaces.

MARCH 12.

51467. Ciba Limited. Process for the manufacture of reserpine. A crude mixture containing reserpine is treated with an agent to form a sparingly water soluble salt of reserpine, and the crude reserpine or reserpine salt is separated by using a solvent completely miscible with water, and simultaneously or subsequently reserpine is purified by known methods.

51468. Schwanhausser & Co., K. G. also trading as Swan Pencil Co., Schwan-Bleistift-Fabrik. A pencil sharpening device. It is combined with a cap for the pencil, the conical bore in the sharpening device and the bore in the extension is co-axial with each other.

MARCH 13.

51469. C. A. Parsons & Company Limited. Improvements in and relating to fluid flow distributing devices. (March 20, 1953.) [Addition to No. 49171.] Fluid flow divided into two separate flows of equal proportions by passing through two metering and two regulating restrictions flow areas of latter being controlled by plate valve or diaphragm responsive to difference of pressures at metering restriction outlet.

51470. Standard Telephones and Cables Limited. Improvements in or relating to methods of recording intelligence. (March 25, 1953.) Recording intelligence wave element by element and means for modifying the stored intelligence.

51471. Standard Telephones and Cables Limited. Improvements in or relating to electric pulse generators employing semi-conductors. (July 20, 1953.) Comprises a crystal triode, a regenerative feed back circuit coupled to the emitter.

51472. AB Tudor. Improvements in or relating to methods and means for drying accumulator electrodes. (January 25, 1954.) The water in the electrodes is replaced by a liquid.

51473. Westinghouse Brake & Signal Company Limited. Improvements relating to voltage regulating systems. (April 12, 1933.) Comprises means for adjusting voltage across d.c. current which means is controlled by a magnetic discriminator, a bridge connected rectifier a voltage sensing circuit.

51474. Andre Rubber Company Limited. Improvements in or relating to resilient torsion joints. (November 13, 1953.) The boundary of the bore of the rigid body and/or boundary of the inner member comprise surfaces that are convex in cross section perpendicular to the axis of relative angular displacement of the rigid body and the inner member.

51475. Imperial Chemical Industries Limited. New Chromiferous azo dyestuffs. (May 1, 1953.) Treating O: O'-dihydroxymonoazo compounds with an agent yielding chromium.

51476. Imperial Chemical Industries Limited. Improvements in or relating to the extraction of coal from the

earth. (May 18, 1953.) Comprises the step of transmitting a blasting effect through a column of water under hydrostatic pressure free from air in a sealed borehole.

51477. Stamicarbon N.V. Process for the purification of lactams. Extracting lactam with from a solution of crude lactam in water immiscible organic solvent and subjecting resulting aqueous extract to after-treatment with organic solvent.

51478. Automatic Telephone and Electric Company Limited. Improvements in or relating to automatic switches for use in telephone or like systems. (March 14, 1953.) Comprises at least one wiper member in the form of wire of hair-pin shape clamped at its free ends.

MARCH 15.

51479. Dalmia Cement (B h a r a t) Limited. Improved reinforcement cage forming or assembling machine and method of forming or assembling reinforcement cages for R.C.C. pipes, columns, posts and the like. Longitudinal bars around which cage is formed held around a shaft by means of adjustable link mechanisms elongating or contracting which the ends of bars are adjusted to lie on periphery of surface of revolution of desired end diameters.

51480. Joseph-Yervant Michel Najjar. Tank and the like structure for transportation of liquids and solids. Comprising a freight carrying space having double walls at the bottom and on the sides.

51481. Void.

51482. Void.

51483. G.N.R.D. P a t e n t Holdings Limited. Improvements in the preparation of 11-oxygenated steroids. (March 17, 1953.) Treating 11 β -hydroxy-12 α -halosteroid with finely divided nickel.

51484. Calumet and Hecla, Inc. Tubing and method of manufacture. By positioning bonding material in longitudinal groove adjacent one edge of strip, comprising and flattening to fuse the same to form seam.

51485. Etablissements NEYRPIIC. Improvements in decanters. Each compartment is provided at the point where the deposited material accumulates an

element forming a baffle providing a flow space for the material, the space being separated from the zone of flow of the liquid.

51486. Ortho Pharmaceutical Corporation. Improvements relating to preparation of vitamin a ethers and esters and to intermediates thereof. Dehydrating pentaene $(CH_3)_5-C_6H_5-CH=CH-CH_3$

$$\frac{C}{OH} - CH=CH - CH = \frac{CH_3}{C} = CH - CH_2$$
 in presence of aliphatic alcohols and/or acids.

51487. Kennedy Van Saun Mfg. & Eng. Corporation. Rotary kiln for calcining materials. Rotary kiln having an elongated wall, the refractory material portion of the wall is supported and prevented from collapsing by a row of open-ended refractory metal pipes spaced with respect to each other.

51488. The Jacques Loewe Research Foundation. Antibiotic and method for production. Fermenting aerobically Streptomyces crystallinus in aqueous nutrient medium.

51489. F. G. R. Henderson and W. J. Calderwood. Improved system of building construction. Foundation blocks with sockets, vertical bars engaged at lower ends in sockets, courses of pre-cast blocks with holes threaded on bars, sealing means between blocks and means engaging upper ends of bars and bearing on upper most blocks sustaining structures in position.

51490. Void.

51491. Void.

51492. Void.

51493. Ciba Limited. Process for the manufacture of new cycloheptadienes. 2- a m i n o-diphenyl-sulfide-2'-carboxylic acids are intramolecularly condensed in the absence of acid condensing agents.

51494. Void.

51495. Void.

51496. A. Altschuler. Process for converting the liquid hydrocarbons into an inflammable jelly. Producing the jellifying substance within the hydrocarbon itself to be treated.

MARCH 16.

51497. Westinghouse Brake & Signal Company Limited. Improvements relating to metal rectifier assemblies.

- (April 22, 1953.) Comprises a hollow cylindrical insulating body enclosing metal rectifiers elements and connector springs.
51498. British Moulded Plastic Limited, Tungstone Products Limited, R. R. Rolles and A. E. Lever. Battery separators. Consisting of a flexible sheet of mineral filled vinyl resin other than natural or synthetic rubber which permeates a fibrous glass layer.
51499. Societe Des Usines Chimiques Rhone-Poulenc. New diphenyl sulphides and process for their preparation. The compounds are prepared by reacting an o-halonitrobenzene with and o-halothiophenol, or by diazotising a 2-amino-2-nitro-diphenyl sulphide and converting the product into the corresponding 2-halogenated compound.
51500. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to phenthiazine derivatives. (April 20, 1953.) Preparation of sulphonic esters of 10-hydroxyalkyl-phenthiazines.
51501. D. P. Mudd. An improved fitting for connecting a cross member to another member, more particularly in the construction of handrails and the like. Comprising a fork element having a pair of arms in which fit a pair of jaw elements and means for retaining the jaw elements in position.
51502. Void.
51503. The Wellcome Foundation Limited. Improvements in or relating to new pharmaceutical compositions. Comprising 1:4 bis (p-dimethylaminophenoxy) butane or 1:6 (p-dimethylaminophenoxy) hexane or acid salt thereof together with a neutral excipient.
51504. The Wellcome Foundation Limited. A process for preparing the laevo-isomers of 1-cyclohexyl-1-phenyl-3-pyrrolidino-propan-1-ol. (March 23, 1953.) Optical resolution of racemic 1-cyclohexyl-1-phenyl-3-pyrrolidino-propan-1-ol and isolating laevo isomer by fractional crystallisation.
51505. The Wellcome Foundation Limited. A process for preparing the laevo-isomers of 1-cyclohexyl-1-phenyl-3-piperidino-propan-1-ol. (August 10, 1953.) Optical resolution of racemic 1-cyclohexyl-1-phenyl-3-piperidino-propan-1-ol and isolating laevo isomer by fractional crystallisation.
51506. J. C. Ridley and S. A. Saxton. Improvements relating to internal combustion engines. (March 17, 1953.) Outlet to liquid connected to engine induction system and diaphragm chamber, valve member carried by diaphragm closes outlet when atmospheric pressure exists in induction system and opens outlet passage when sub-atmospheric pressure exists in the induction system.
51507. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of dichlorostyryl-pyridinium compounds. By subjecting α -or picoline to a series of operations comprising in any desired sequence treatment with a quaternizing agent and with a dichlorobenzaldehyde.
51508. Ciba Limited. Manufacture of new basically substituted heterocyclic compounds. Condensing an 11-o x o-dibenzo-[b:f]-thia-[1]-aza-[4]-c y c l o-heptadiene-[2:6]-compound with a tertiary aminoalkyl or quaternary ammonium alkyl compound at the 10-position.
- MARCH 17.
51509. Void.
51510. Union Carbide and Carbon Corporation. Primary galvanic cell. (December 23, 1953.) Consisting of a cup-shaped consumable metal electrode containing a centrally positioned carbonaceous electrode surrounded with a depolarizer mix and an immobilised electrolyte disposed between the depolarizer mix and the inside wall of the said container.
51511. Dunlop Rubber Company Limited. Expanded thermoplastic materials. Frothing a plastisol of the resin in the presence of a thickening agent, and heating the stabilised froth to gel the resin.
51512. G. N. R. D. Patent Holdings Limited. Improvements in or relating to the preparation of 11 α -halo-12 β -hydroxy steroids. (March 24, 1953.) By reduction of 11 α -halo-12-ketosteroid by sodium borohydride containing a buffering agent.
51513. Olympia Werke Aktiengesellschaft. Urdu key board. Wherein letters, half letters, letter combinations, formal symbols, punctuation marks and numerals are arranged on the key board in a particular way.

51514. Dr. D. Mastini. Device to be applied to telephone apparatuses to automatically carry out telephone transmissions records and remote controls in general. Coupling is of acoustic nature which operate relays to record communication on rollers or records.
51515. H. D. Walton. Improvements in and relating to the electrolytic cleaning of articles of metal. (March 18, 1953.) The electrolytic bath consists of HCl and the electrolysis is carried below 120°F with current density of 12 to 120 amperes per square foot.
51516. Ciba Limited. Process for the manufacture of reaction products of epichlorhydrin and polyhydric alcohols. Epichlorohydrin is reacted with a polyhydric alcohol in the presence of a strong alkali, in a single stage.
51517. Farwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning. Dropping device for bottles. (April 16, 1953.) Having a dropping rod provided with a groove serving as a drop conveyer.
51518. Void.
51519. Void.
51520. Cognate with application No. 51359.
51521. Void.
51522. Void.
51523. The Benjamin Electric Limited. Improvements in electric lighting fittings namely for making electrical and mechanical couplings. Having crown member and detachable housing member, both having electric connector which are automatically separated when the housing member is detached, both members having co-operating parts forming a hinge between the members, latching means on one said member with a cam surface and guiding means on the other member to be engaged by the latching means.
- of cereal groundnut flours with skimmed milk powder.
51526. Griffin Wheel Company. Improvements in a mold for casting ferrous metals. Comprising a plurality of refractory blocks defining a casting cavity, a gate a riser cavity and a gas permeable liner in the riser cavity.
51527. Griffin Wheel Company. Improvements in a method and apparatus for providing riser cups in a mold. Supporting in riser opening a cup-shaped liner of a mixture of materials adapted to harden into a refractory shell upon baking, and baking such liner by residual heat in the mould.
51528. Griffin Wheel Company. Improvements in a method of forming a wheel having an axle hole therein. A solid metal wheel is casted and then an axle hole is cut through by directing the flame of a cutting torch.
51529. The Indian Oxygen & Acetylene Co. Ltd. Light weight containers for continuous supply of oxygen and breathing apparatus having such a container. Comprising a cartridge formed of porous materials.
51530. The General Electric Company Limited. Improvements in or relating to electric lighting equipment having an enclosure for a lamp. (March 23, 1953.) Comprising enclosure of light-transmissive material, a support-engaging member supporting the enclosure, to engage with an external member for supporting the unit, lamp support means carried by the support-engaging member, the enclosure having a detachable end cover, lamp connectors within the enclosure and electric supply leads.
51531. Star Stampa Tessuti Artistici S.P.A. Process for printing fabrics. The carrier surface receives a coating of an aqueous solution of Marseilles soap, Monopol soap and zinc stearate.

MARCH 18.

51524. Council of Scientific and Industrial Research. Improvements in or relating to the electroplating of metals on aluminium or its alloys. Aluminium or aluminium alloy is dipped in ferric chloride solution and then electroplating with nickel and/or chromium.
51525. Council of Scientific and Industrial Research. A process for the preparation of a malt food. Mixture

MARCH 20.

51532. Gregory Industries Inc. Improvements relating to electric arc pin brazing. A quantity of brazing flux enclosed between one end of the pin and a piece of brazing metal secured to the end of the pin.
51533. Griffin Wheel Company. Improvements in a method and apparatus for producing castings. Forcing molten material through a tube into casting cavity until it is filled, then stopping

the flow of the material by moving a plunger valve disposed within the cavity against the gate to close same.

51534. Griffin Wheel Company. Improvements in a casting method and apparatus. [Addition to No. 51533.] Positioning with its lower end immersed in molten metal within a sealed chamber also positioning a mold with its gate through the bottom-section communicating with the tube externally, and developing sub-atmospheric pressure in the chamber to lower the metal in the tube, and then developing superatmospheric pressure in the tube into the mold.

51535. Griffin Wheel Company. Improvements in a method of making castings. [Addition to No. 51533.] Pouring molten metal into a gate in the bottom of a mold having a cavity connected to the gate, closing the gate after it is filled, and lifting the casting from the mold after solidification

51536. N. V. De Bataafsche Petroleum Maatschappij. Method of reducing corrosion of corrodible metal surfaces which are in contact with an aqueous amine solution. Adding alkali metal orthophosphate to aqueous amine solution in contact of which the metal surfaces are.

51537. Void.

51538. A. N. Bansal. Improved arrangement of an illumination device in Taj Mahal model. Dry cell mounted over the pedestal of a Taj Mahal model, gripped on both sides by two springs, soldering the ends of two wires one at the apex and the other at the metal portion of a bulb and hanging the bulb in the model by these wires, connecting one wire to one terminal of the cell through one of the spring and the other wire to the other terminal of the cell through the other spring and a switch.

51539. G. V. Padhye. Improvements in or relating to diversity receiving systems, in wireless communications. Switching circuit consists of two similar circuits, each comprising of a receiver, a potentiometer and a parallel combination of a resistance and another resistance and a diode valve in series, the whole combination being connected to ground through a condenser, and connected to a switch of the bistable multivibrate.

MARCH 22.

51540. Ozalid Company Limited and G. W. Smith. Improvements in or relating to transfer materials such as photographic paper for use in the migratory transfer of a photographic image. (March 25, 1953.) Transfer material containing substance which neutralises excess alkali of the developer which remains in the transfer layer after the positive copy has been prepared.

51541. Ozalid Company Limited and G. W. Smith. Improvements in or relating to methods and transfer and negative materials for use in the migratory transfer of a photographic image. In which the binding medium in both the transfer and negative materials comprises starch.

51542. E. D. O. Bernier. Improvements in or relating to the methods of permanently crimping synthetic textile yarns and installations therefor. The yarns are subjected in the highly twisted state for about 0.1 to 20 seconds to a treatment with saturated steam at an absolute pressure of at least 2 atmospheres and are then run through a cooling zone.

51543. Imperial Chemical Industries Limited. Improvements in or relating to the melting and casting of high melting point metals of alloys. (April 8, 1953.) Melting the charge of metal or alloy in cooled crucible conforming to the shape of ingot under a plurality of electrodes arranged so that uniform melting is effected.

51544. E. Graetz and M. M. A. G. N. Muller. A method for strengthening the ash skeleton of incandescent mantles in illuminating appliances. (January 29, 1954.) Introducing heat resisting substances with the flow of gas into the incandescent mantle in the position of use.

51545. S. L. Kirloskar. Fuel pumps for diesel engines. Fuel pump rack and its extension rod covered by sheaths of elastic material; sheath of the latter houses coil spring surround extension rod.

51546. Standard Telephones and Cables Limited. Improvements in or relating to low resistance contacts to germanium. (June 4, 1953.) Nickel stannide deposited on the surface of germanium and heated to release tin on said surface and the surface of the deposit is coated with soft solder.

51547. Ciba Limited. Pharmaceutical preparations containing a pure sedative-hypnotic and hypotensive substance. [Divided out of No. 47806; antedated to August 4, 1952.] Comprising reserpine and a substance suitable for parenteral or oral administration.

51548. Mannesmann Aktiengesellschaft. Improvements in or relating to processes and apparatus for the manufacture of tubes from hardening substances, such as concrete and the like. A batch of wet material is supplied to a core roller by means of a conveyor belt guided by tension and grid rollers, the material on the core roller is compressed gradually.

51549. Naamlooze Vennootschap W. A. Scholten's Chemische Fabrieken. A process of improving the physical properties of the soil and of preparing soil conditioners. A starch product is incorporated in the soil.

MARCH 23.

51550. Void.

51551. Societe Des Usines Chimiques Rhone-Poulenc. New Derivatives of phenthiazine and their method of preparation. (April 13, 1953.) An amine of the formula $R-N[(CH_2)_nHal]_2$ is heated with a dialkyl-amino alkyl phenolthiazine, R^1 being a hydrogen atom or a lower alkyl radical.

51552. British Insulated Callender's Cables Limited. Improvements relating to apparatus for use in the application of sheaths to electric cables. (April 16, 1953.) Comprises a device for gripping the coil, a car having means for propelling it from the soil, a source of compressed air adapted to be connected to the tube.

51553. L. Rado. Collapsible container. (March 24, 1953.) The nozzle separately made, protrudes out of a perforation in a side wall of the container near to one narrowed end thereof.

51554. Megator Pumps & Compressors Limited. Improvements in rotary pumps of the non-centrifugal type. (March 24, 1953.) Shoes are positioned around the axis to balance out substantially the bending forces on the shaft.

MARCH 24.

51555. "LICENCIA" Talalmanyokat Ertekisito Vallalat. Elastic thread-cutting

die with automatic adjustment. Cutting edges are supported by supporting members which are connected to one another by elastically deformable girder members so as to form a closed elastic system.

51556. Dorman, Long and Company Limited. Improvements in or relating to rolling mill plant. (April 2, 1953.) Comprising a number of stations spaced apart to accommodate a universal beam mill, a stand for an edging mill, work supporting tables provided between stations, certain of which are fixed and others removable.

51557. Imperial Chemical Industries Limited. Improvements in or relating to the manufacture of titanium or zirconium base alloys. (April 8, 1953.) Incorporating the alloying ingredients in the form of one or more master alloys or compacted powder mixtures having a specific gravity of the order of that of the basic metal.

51558. Chas. Pfizer & Co., Inc. Improvements in or relating to antimicrobial agent. By cultivating microorganism streptomyces griseolus No. 14576-4 or streptomyces rosechromogenus No. 15855-4 in aqueous nutrient medium under submerged aerobic conditions.

51559. H. W. Ward and Company Limited. A device for use on lathes. (April 20, 1953.) Comprising in combination with the saddle of an angularly movable nut and tool actuating spindle, a handle secured to one end of the spindle, a sleeve loaded by a spring, a catch and an axially slidable rod.

51560. British Insulated Callender's Cables Limited. An improved method and apparatus for applying a metal sheath to an electric cable. (April 23, 1953.) Towing device provided with attachments for the sheath tube, and the towing hawser and means for catching and securing the head of the plunger.

51561. Dr. Jur. H. Klugkist. Method of producing synthetic threads and rayon. Thread bundle ejected from the spinneret is passed successively through two spinning baths and then into a third precipitation bath and where it is regenerated into cellulose after which the bundle is washed, dressed, dyed, twisted and rolled.

51562. Standard Telephones and Cables Limited. Improvements in or relating to the storage of intelligence. (March 25, 1953.) Comprises means storing

intelligence and means for mounting separate reading and recording means.

MARCH 25.

51563. Standard Oil Development Company. Process for reactivating spent catalyst. Treating the deactivated catalyst with a halogen containing compound.

51564. Societe Des Usines Chimiques Rohne-Poulehc. Improvements in or relating to halogenated organic amides. (April 20, 1953.) Void after publication. "Reacting $2\text{-CH}_2(\text{CH}_3)_2$ C.Q. with $\text{T-CH-C}_6\text{H}_5$ where 2 is either Cl or Br and Q and T are substituents which jointly form—CO-NH-linkage."

51565. N. V. De Bataafsche Petroleum Maatschappij. Process for converting mercaptans or mercaptides into disulphides. Using aqueous alkali metal hydroxide solutions containing phenolates with a water content of 54 per cent. by volume or less.

51566. "Shell" Refining and Marketing Company Limited. Improvements in and relating to motor fuels. (April 2, 1953.) Containing not more than 2.0 per cent. of a hydrocarbon lubricating oil containing an oil soluble salt of an aromatic or cycloaliphatic carboxylic or sulphonic acid or of a phenol with a metal of Group II of Periodic Table.

51567. Shaparia Dock & Steel Co., Ltd. Improvements in or relating to life buoys. Provided with circumferential, corrugations.

51568. Owens-Corning Fiberglas Corporation. Process of and means for making sheets or mats of fibers and particularly fibrous glass strand. The strand is fed against a deflecting surface located in the path of the strand.

51569. E. J. Towns and M. R. Thapar. Improvements in closures for bottles and the like. (Addition to No. 42350.) Comprising a removal tab integral with and projecting from cap and a securing tab opposite to removal tab.

MARCH 26.

51570. R. Calistri. Improvement in reciprocating compressors. A rocking rod passes through an elastic member forming a seal between the two chambers containing the rotating members

and the reciprocating members respectively.

51571. Ruhrchemie Aktiengesellschaft. Improvements in or relating to waxes. The wax comprises a mixture of paraffins, wax acids and calcium soaps having at least 25 carbon atoms in the molecule.

51572. W. H. Kuntz. Washing machine. By setting up surface flow currents in the washing solution towards a washing device therein and projecting air bubbles against the fabrics to effect aeration and flotation thereof to washing device.

MARCH 27.

51573. M. S. Wadke. An improved type of elastic chain band with locking arrangement for wrist watches and the like. Elastic chain band having 'T' shaped diaphragms with slotted, notched and partly raised arms, bent springs and 'U' shaped connecting links.

51574. Void.

51575. Council of Scientific and Industrial Research. A process for treatment of the Agave plant for the preparation of fructose. Extracting soft under wood of Agave plant with hot water and the further, hydrolysing the water extracts.

MARCH 29.

51576. Void.

51577. J. Pfistershammer. Support structure constructed from hollow members, more particularly tube of thin hardrolled metal sheets and method of producing this support structure. Arcuate rounded connecting tongues for connecting wall portions of metal sheet is forming hollow members, and ends of such member; transverse shaped ends portions at ends of members to be connected enclosed by means reinforced guided and clamped to act as force nodes receiving forces from struts, connections and fixing elements over cross section of members.

51578. Andre Rubber Company Limited. Improvements in or relating to resilient torsion joints. (November 16, 1953.) Either or each of the interior boundary of the outer member and the exterior boundary of the inner member comprise a plurality of shims upon which the elastomeric materials roll and bear against.

MARCH 30.

51579. Devoe & Raynolds Company, Inc. Manufacture of resins. Heating a chlorhydrin with a dihydric phenol.
51580. International Business Machines Corporation. Improvements in or relating to a self-complementing electronic counter. Including a plurality of cascade coupled triggers, each trigger having a pair of cross coupled triodes, means for generating a first impulse and network means responsive thereto for generating a second impulse.
51581. S. I. S. Societe D'Investissements Collectifs. A method for bleaching cellulosic fibres. Continuously forwarding a mass of cellulose fibres to a fibre-separating zone and introducing a fluid bleach into said zone and finally withdrawing the fibres.
51582. Montecatini, Societa Generale Per L'Industria Mineraria E. Chimica. Process for pulverizing polyethylene. Coarse and dry polyethylene particles are subjected to mechanical pressing forces at a temperature between 50° and a temperature slightly below the melting point of polyethylene to reduce them into fine powder.
51583. N. V. Werf Gusto Voorheen Firma A. F. Smulders. Portable crane with a pivoting jib. The drawing element is disengaged and is then extended with one or more auxiliary elements, a member being present with which the jib can be temporarily fixed while the drawing element is being extended and the counterweight displaced.
51584. Ciba Limited. New conversion products of azo dyestuffs containing metal compounds in complex union and process for making them. Azo dyestuff which contains metal is reacted with a nitrogenous base not having the character of a dyestuff.
51585. De Vries & Co.'s Ijzerhandel N.V. Improvements in or relating to the attachment of door handle or door knob on its spindle. Wherein the spindle is provided with a toothing which co-operates with a spring secured in the attaching hole of the door handle or knob.
51586. K. Sakamoto. A device of a cop change power loom not to bring double yarns in warps. Weft yarn is cut before it is broken by the tension of the expelled cop and is brought out from the passage of the shuttle and held there until the cop is changed in the next time.
51587. Void.
51588. Patents and Investments Limited. Draw-benches. Comprising an attachment for severing drawn lengths of stock, the attachment comprising at least one pair of counter-rotating spindles having one pair of coacting cutters, the attachment being mounted adjacent and immediately in front of the draw bench.
51589. Societe Nationale De Constructions Aeronautiques Du Sud-Ouest. Improvements in auxiliary reaction-propulsion units for aircraft. Reaction unit provided with one air intake opening located to the rear of closed and streamlined end.
51590. Inertia Starter Developments Limited, V. Silberstein and L. Danilewicz. Gear means for transferring rotary momentum from one mass to another, and inertia starters incorporating the same. (April 1, 1953.) Input and output shaft are constrained to limited angular movement through progressively changing gear ratio.
51591. The English Electric Company Limited. Improvements relating to mine winders. (April 24, 1953.) Winder actuated means automatically cut off power to engine or motor and cause rapid application of brakes bringing conveyance to rest above keps; brakes automatically released momentarily to allow conveyance to be settled on the keps and take the slack rope.
51592. The English Electric Company Limited. Improvements in and relating to hydraulic turbines. (April 24, 1953.) Pivoted hydro-brake vanes partially filled with easily movable inertia medium which under centrifugal force tilts the blades and retain them in operative position; when turbine speed drops the medium flows inside pivot axis and tilts the vane back to retracted position.
51593. J. E. Kennedy. Plant for producing caustic lime and kiln for use therein. By crushing limestone, drying, screening, preheating, feeding the preheated limestone into the feed end of the kiln and completing the calcining in the discharge end of the kiln.
51594. Power Jets (Research and Development) Limited. Jet propelled aircraft. (April 8, 1953.) Jet engines mounted in the wing to discharge a propulsive jet stream through a long

shallow jet nozzle extending spanwise along a rear portion of the wing.

51595. Naamlouze Vennootschap W. A. Scholten's Chemische Fabrieken. A process for the manufacture of dry, cold water soluble binding agents, adhesives, finishing agents and the like. (March 31, 1953.) Heating sufficiently disintegrated starch, etherified esterified or not with urea or urea derivative and aldehyde or compound generating aldehyde in neutral or alkaline medium and spreading mixture into thin layer and drying.

51596. Cognate with appln. No. 51448.

MARCH 31.

51597. H. G. Martin. Improvements in and relating to reservoir writing instruments. A viscous plug is provided at the end of the ink column and is separated from it by a bubble of gas.

51598. Compagnie Francaise Des Matieres Colorantes. Improvements in the preparation of diazoamino derivatives. A diazo or tetrazo derivative is condensed with an N-(2-carboxyphenyl)-glycine derivative.

51599. Compagnie Francaise Des Matieres Colorantes. Improvements in colouring compositions and the printing of cellulosic textile materials therewith. The composition comprises a coupling component and a diazoaminoderivative derived from a substituted anthranilic acid.

51600. Compagnie Francaise Des Matieres Colorantes. Improvements in diazoamino derivatives and in their preparation. A diazo or tetrazo compound is condensed with an N-substituted derivative of anthranilic acid.

51601. Compagnie Francaise Des Matieres Colorantes. Improvements in diazoamino derivatives and the coloration of materials therewith. (July 16, 1953.) A diazo-or tetrazo- compound is condensed with a substituted anthranilic acid to yield diazoamino derivatives useful for colouring textiles.

51602. The General Electric Company Limited. Improvements or relating to dome, bowl or like refractor for use in lighting fittings. (April 23, 1953.) Having refractive prisms on its inside surface, said prisms being in the form of a screw thread about the axis of the refractor.

51603. M. Lehner-Stirnemann. Time-keeper apparatus for the periods of

standstill of machines. Comprising a first time-measuring instrument and a set of second time measuring instruments.

51604. The National Smelting Company Limited. Improvements in or relating to the smelting of lead-containing ores. (April 10, 1953.) Air blast and a part of charge are preheated to maintain temperature at the top of furnace at 700-900°C and a reducing atmosphere is maintained in off-take vapours.

51605. Void.

51606. Babcock & Wilcox Limited. Improvements in or relating to once-through, forced flow tubulous boilers. Provided with parallel connected, vapour generating tubes and with means for enabling the transition sections of the tubes periodically to be washed.

51607. Douglas Aircraft Company, Inc. Improvements in or relating to new compositions of matter. Mixture of chlorinated biphenyl and tri-aryl phosphate or di-aryl-alkyl phosphate.

51608. Dot Pens Limited. Improvements in or relating to fountainpens. The pen is provided at its end point with a metallic ring.

51609. T. J. Smith & Nephew Limited. Improvements in and relating to medical and surgical plasters. (April 10, 1953.) Adhesively coated plaster wherein the coating dried has steam blown through it from the uncoated side to form holes in the adhesive coating.

51610. Director, Technical Development, M.G.O. Branch, Army Headquarters, New Delhi. Utilisation of urea-formaldehyde resin for cotton textiles against attack by solar radiation and/or micro-organisms. Impregnating textiles in a solution of urea-formaldehyde resin at pH 4.

APRIL 1.

51611. H. J. Elliott and L. G. Ludlow. Improvements in or relating to the separation of lighter from heavier particles, particularly applicable to the separation of sulphur from sulphur ores. Freeing the powdered material into a liquid medium and producing a venturi effect on the solution.

APRIL 2.

51612. Lenova A.-G. Improved valve gear for internal combustion engines. Ante dated May 29, 1953. Cam shaft and

part of valve actuating gear arranged in extended part of crank case and part in cylinder head; link between the parts constituted by a thrust piece parallel to cylinder axis and a member movable perpendicular to the axis.

51613. Daimler-Nenz Aktiengesellschaft. Improvements relating to brake lever mechanisms. (May 20, 1953.) Pawl release device adapted for having operative engagement with a fixed stop when the lever is moved to its "off" position.

51614. Void.

51615. The Wellcome Foundation Limited. Improvements in derivatives of pyrimidine. (April 24, 1953.) 4, 5-diamino-6-mercapto-pyrimidine is prepared by reacting 4-amino-5-nitro-6-chloro-pyrimidine with an excess of ammonium or alkali metal hydrosulphide.

51616. Hoganas Billesholms Aktiebolag. Method and apparatus for the manufacture of fibres of an inorganic thermoplastic material. (March 26, 1954.) Subjecting the fibres first to a vertically directed stream of air and then to a horizontally directed stream of air followed by coating with a liquid binder or lubricant.

51617. Hoganas Billesholms Aktiebolag. Method and an apparatus for a uniform distribution fibres on a conveyor belt. (March 26, 1954.) Subjecting the stream of fibres into a vertical pit where the fibres are directed downwards by vanes oscillating in such a manner that the fibres are distributed uniformly over a conveyor belt placed at the bottom of the pit.

51618. Hoganas Billesholms Aktiebolag. Method and arrangement for cooling rotating shafts. (March 26, 1954.) Rotation of shaft is utilised for driving the cooling agent by centrifugal effect through a channel going centrally through the shaft.

51619. Aktiebolaget Separator. A method in making surface active products. The material present in the treatment chamber is kept in a homogeneous condition and is brought to actuate a viscometer according to which the supply of components is regulated corresponding to a predetermined curve.

APRIL 3.

51620. Rheinpreussen Aktiengesellschaft fuer Bergbau und Chemie. A process for

the hydrogenation of carbon monoxide. (February 22, 1954.) Temperature of the catalyst suspension in the reactor rises to the extent of from 10°C to 100°C.

51621. P. J. M. T. Allard. Improvements in devices for inserting posts or piles into the ground. Hollow annular ground penetrating member is connected to the lower part of the tube by a corresponding socket device which includes unidirectional rotating means.

51622. The British Tabulating Machine Company Limited. Improvements in or relating to data checking apparatus. (May 20, 1953.) Comprises means for entering the data, means for recording it under control, comparing means and check code calculating means.

51623. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in or relating to phenthiazine derivatives and to their production. (April 23, 1953.) By reacting a 1-pyrrolidino-3-halogenpropane with phenthiazine.

APRIL 5.

51624. A. R. Hug. Process and device for fibre-coating materials and objects. Electric field applied between the fibres container and the article to be fibre-coated, said article being coated with adhesive prior to the application of the electric field.

51625. Council of Scientific and Industrial Research. A process for the concentration of manganese ores high in iron. Separating manganese minerals from fully magnetic minerals by magnetic separators and desliming the ore prior to magnetic separation.

51626. Void.

51627. Void.

51628. Bijoy Banerjee. Antibiotic dentifrice composition. Comprising penicillic acid β sodium salt, Bacitracin, Tyrothricin and Polymixin.

51629. The Firestone Tire & Rubber Company. Improvements in or relating to sheet material handling device. Comprising a conveyor adapted to move a section of bias-cut tyre ply towards another conveyor.

51630. Joseph Bancroft & Sons Co. Print pastes for the production of durable inlay effects in embossed fabrics. Applying a paste containing pigment, alkyd resin and oil to outer surface or heated engraved bowl of embossing

calender and simultaneously embossing and transferring the paste to fabric which is then heated to harden resin.

51631. The General Electric Company Limited. Improvements in or relating to the manufacture of crystal contact devices. (April 14, 1953.) Of the kind comprising a plurality of closely spaced contact members each making point contact with a semi-conducting crystal element.

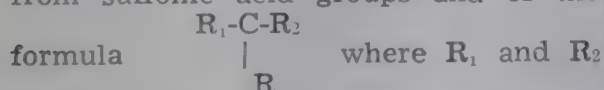
51632. E. I. Du Pont De Numours and Company. Pathalocyanine precursors and their conversion. Phalonitrile, Cu or Ni salt ammonia and a catalyst or (h) a di-imino-isoindoline and a Cu or Ni salt are reacted to yield the compounds.

51633. Stamicarbon N. V. Process for the preparation of urea. Carrying out synthesis in presence of oxygen in Cr-Ni steel apparatus which steel contains 16 per cent. of Cr. and 8 per cent. of Ni.

51634. Imperial Chemical Industries Limited. Cord-like ignition devices for igniting safety fuses. (May 18, 1953.) Envelope confining the wick structure comprises mixture of oxidising and reducing agents bound by a combustible bonding agent.

51635. Void.

51636. Ciba Limited. Process for dyeing and printing fibres of polyacrylonitriles. Using a compound containing or capable of forming a cation which is free from sulfonic acid groups and of the



represent aryl radicals containing an amino group and R is hydrogen.

51637. Sandoz, A. G. New process for the preparation of ergotamine ergotamine and ergometrine. A culture medium containing zinc and iron ions is inoculated with strain of *Claviceps purpurea*, incubated and alkaloids extracted with organic solvents.

APRIL 6.

51638. Union Carbide and Carbon Corporation. Welding rod guide and contact jaw assembly. (March 16, 1954.) Comprising a body member having a central bore and a slot extending transversely through the body in axial alignment with the bore.

51639. Infilco Incorporated. Improvements in or relating to apparatus for

treating liquid. Apparatus consists of a chamber in a sedimentation tank with means to introduce thickened sludge in the chamber from the tank.

51640. United States Steel Corporation. Electrostatic coating apparatus. Work-piece to be coated travels through a cabinet and means are provided for delivering a mist of coating material.

51641. Imperial Chemical Industries Limited. Improvements in or relating to ammonium nitrate and compositions containing it. (June 1, 1953.) Having surface deposit of at least one condensation products of (1 mol.) formaldehyde and (2 mols.) naphthalene monosulphonic acid.

51642. May & Baker Limited. Improvements in or relating to formazans. (July 17, 1952.) [Divided out of No. 49863; ante-dated July 6, 1953.] Coupling $R_3-N=N-X$ with $R_2-NH-N=CHR_1$ wherein R_1 is an alkyl or aryl group and R_2, R_3 are aryl groups at least one of the radicals R_2 or R_3 being substituted by a group $A-R_4$ in which $-A-$ is $-CH=CH-$ or $-N=N-$ and R_4 represents aryl group.

51643. F. Perkins Limited. Improvements in or relating to engine turning mechanisms. A relay controlling starting aid mechanism only when voltage across starter motor falls below the value required to operate another relay controlling its energising circuit.

51644. V. A. Araneta. Improvements in or relating to tractor wheels. Comprising a rim with a plurality of angle forming cleats disposed transversely and protruding outwardly of the periphery of said rim.

51645. Aktiebolaget Separator. A method and apparatus for continuous preparation of chemical products. Performed product in the form of an uninterrupted flow of fluid material is kept in constant circulation in a particular circuit to which one of the reaction components is added.

51646. Aktiebolaget Separator. A method in continuous soapmaking. During saponification the electrolyte content is adjusted so that the soap mass will be in the fitting zone of a Me Bain diagram.

APRIL 7.

51647. Void.

51648. Void.

51649. Etablissements NEYRPIC. Improvements in reaction turbines. Hollow nose extended beyond the plane of outlet from wheel and provided with opening both in the end portion as well as lateral wall of the nose.

51650. Vandervell Products Limited. Improvements relating to electrodeposition. (April 27, 1953.) Solution contains a controlling agent and the process is carried at a pH between 3 and 10.5.

51651. Societe Des Usines Chimiques Rhone-Poulenc. New phenthiazine derivatives. (June 29, 1953.) Condensing 3-chloro-phenthiazine with 1-piperidino-3-halogenopropane or piperidine with a 10-(3-halogenopropyl)-3-chloro-phenthiazine.

51652. Novo Terapeutisk Laboratorium A/S. Container containing pulverulent therapeutic substances sensitive to moisture. Having a closing or sealing means consisting of butyl rubber.

51653. Void.

APRIL 8.

51654. The General Electric Company Limited. Improvements in or relating to the manufacture of glass envelopes for cathode ray tubes. (April 13, 1953.) Pressing the conical section with a closed narrower end and allowing the glass to harden, heating to soften to glass, pushing it to form a cylinder and then shaping the cylinder.

51655. The General Electric Company Limited. Improvements in or relating to the manufacture of glass bodies comprising a relatively thick main-wall portion and a relatively thin-walled neck portion extending from an aperture in the main-wall portion. Forming the main wall portion from heat softened or molten glass and continuous where the aperture is to be formed.

51656. Rocla Pipes Limited. A method of applying wire under controlled tension in the manufacture of prestressed reinforced concrete articles. Drawing wire through train of pulleys and controlling bending of the wire when drawn through the train.

51657. Rocla Pipes Limited. Improved means for tensioning reinforcing wires for concrete beams, slabs and other articles. Reinforcing wires anchored at one end and extending from tubular cavity in the article gripped by wire engaging means adapted to be drawn

outwardly by tension applying means and means for maintaining tension until cement grouting fed to cavity sets and hardens.

51658. Rocla Pipes Limited. Process for improving the resistance to corrosion of concrete or other calcareous cementitious matter. (June 4, 1953.) Treating concrete by successive applications of silico-fluoride, first by a weak solution of magnesium or zinc silico-fluoride and then by strong solution of aluminium silico fluoride.

51659. Asta-Werke Aktiengesellschaft. A method of providing fresh pure cultures of living micro-organisms at the place of application. (May 1, 1953.) Comprising enclosing micro-organisms in a container, placing it in a closed vessel containing culture medium so that the container is partially immersed in culture medium and providing communication between the inside of the container and culture medium at the time and place of application of the micro-organisms.

51660. Tintoria Comense S.p.A. Process and apparatus for treating textiles. Wherein web sections facing one, another and spaced at less than 25 mms. are translated in opposite directions.

APRIL 9.

51661. D. S. Roberts. Improved electrical appliances using incandescent filaments. A bulb using incandescent filament is provided with stand by filaments which may be connected to external contacts.

51662. Void.

51663. PECHINEY Compagnie de Produits Chimiques et Electrometallurgiques. Devices for electrolysis cells with high current strength. Current distribution on the whole surface of cell is made homogeneous and magnetic field components are made constant.

51664. Farbenfabriken Bayer Aktiengesellschaft. Process for imparting flame-resistance with the aid of organic phosphorus compounds. (February 22, 1954.) By applying to the materials salts of phosphoric acids and basic condensation products formed by contacting aldehydes and certain nitrogen compounds.

51665. British Insulated Callender's Cables Limited. Improvements relating to machines for lapping strips of material on electric conductors and

- other articles. (May 13, 1953.) Provided with guides having individual driving mechanisms operated by a single driving member gear ratio depending on angular position of guides.
51666. Stamicarbon N. V. Apparatus for continuously carrying out reactions employing solid substances in the fluidised state. Comprises two or more vertical chambers in series in which finely divided solid material is maintained in the fluidised state, said chambers being provided with paths for passage of gas therethrough.
51667. Bowaters Development and Research Limited. Device for clearing paper broke. (June 4, 1953.) Comprising propelling means to move the doctored broke along a doctor back onto a removal conveyor.
51668. E. D. O. Bernier. Improvements in the manufacture of permanently crimped or curled yarn from fully synthetic organic textile fibres. Comprising in imparting to organic synthetic fibres a temporary high twist by means of a false-twisting device.
51669. The Ruberoid Company Limited. Improvements in or relating to roofing felt. (April 14, 1953.) One side of the roofing felt in sheet form is marked with fixing marks for correct laying while the other side is marked with fixing marks for correct cutting and laying.
51670. Seetru Limited. Improvements in fluid valves and sealing means. Valve chamber in the form of stepped or galleried cylinder with a sealing bore and a hydrostatic valving ring moving in and out of engagement with the bore.
51671. Dipl. Ing. A. Kreidler. Improvements in or relating to motor cycles. Gear system is mounted in one block with free wheeling in low gear and clutch arrangement for the higher gear.
- APRIL 10.
51672. Void.
51673. Void.
51674. Imperial Chemical Industries Limited. Improved potassium nitrate products and a method for their production. (June 12, 1953.) Consisting of potassium nitrate crystals bearing on their surfaces a deposit comprising a salt soluble in a saturated potassium nitrate solution at 20°C of a condensation product of 1 mol. of formaldehyde and 2 mols. of naphthalene monosulphonic acid.
51675. Deutsche Gold-Und Silber-Scheidanstalt Vormals Roessler. Continuous process for the bleaching of cellulosic textiles. (April 1, 1954.) (Addition to No. 49671.) Intensively steeped in cold chlorite bleaching bath for short time, heated to 100°C and passed through closed chamber.
51676. Industrial and Financial Association Inc. Improvements relating to continuous horizontal rotary filters with rocking cells. [Divided out of No. 48953 ante-dated to February 11, 1953.] Comprising closed path rocking cells on movable frame stationary central distributor, with a rotatable head and flexible connection therefor with cell outlet.
51677. Sterling Drug Inc. Preparation of 5-n-heptyl-2-thiohydantoin. Reacting 2-aminononanoic acid with water-soluble inorganic thiocyanate and lower alkanic acid, and deacylating the product.
- APRIL 12.
51678. D e m a g -Elektrometallurgie G.m.b.H. Improvements in or relating to a method of separating silver and copper from coinage alloys. Adding a halide to the electrolyte used for electrolysis of re-alloyed coinage.
51679. Estirajes Balmes S. A. Improvements in or relating to drawing systems applicable to fly frames and continuous spinning machines. (December 14, 1953.) Using a flexible element or endless band with a predetermined tension to connect the top roller which is not subjected to the action of pressure with the top roller of the preceding pair.
51680. M. N. Churi. Rail lifting jack. With an oblong piece having a threaded hole for a screw at each end and a base plate.
51681. K N O L L Aktiengesellschaft, Chemische Fabriken, Ludwigshafen on Rhine. Process for producing of bicyclic substituted amino alcohols. Reacting bicycloalkylated 1, 3-aminoketones with organometallic compounds or reacting 1, 3-aminoketones with bicycloalkylated organometallic compound.
51682. American Cyanamid Company. Improvements relating to method of and apparatus for forming plastic film covered pre-compacted powder-filled

capsules. (July 25, 1953.) Compacting powder into slugs, passing plastic sheet having a series of recesses under slugs, dropping a slug into each recess, placing a second strip over first one and sealing both strips.

51683. Warner-Hudnut, Inc. Improvements in or relating to substituted ethylene diamines and the preparation thereof. Condensing with octyl bromide, N, N-dimethyl-N-R-ethylene-diamine, R being mono-alkyl substituted or unsubstituted 2-pyrimidyl or 2-pyrazyl.

51684. Chemical Construction Corporation. Improvements in separation process of ammonia from synthesized urea liquid. Passing water, ammonia and carbon dioxide vapours successively through stripping zone and enrichment zone, adding water to enrichment section of distillation column removing ammonia from final stage and recycling ammonia.

51685. Imperial Chemical Industries Limited. New dyestuffs. (April 23, 1953.) Treating 3-(1-aminoanthraquinone-2-carboxylamido)-benzanthrone-pyrazoleanthrone with a sulphating agent in the presence of a metal.

51686. The Benjamin Electric Limited. Improvements in or relating to lighting fittings. (April 28, 1953.) Provided with a secondary reflector releasably attached to the main reflector having an aperture.

51687. Rola Company (Australia) Proprietary Limited. Improvements in or relating to transformers and the like. (May 7, 1953.) Having a winding thereof at such an electrical potential in use that a leakage current may flow therefrom to another winding or to the core, and one or more terminals mounted upon a terminal strip.

51688. Albion Motors Limited. Improvements in or relating to mechanical linkages. Clearance between members of linkage is artificially produced during each unstressed period by means of a wedge or like members.

51689. Don Watson & Co. Ltd. Improvements in or relating to bobbins. Metal bobbin being constructed one part comprising the shank and the head integral with each other and the other part comprising the base with engagement means between the said base and the said shank.

APRIL 13.

51690. Void.

51691. L. Moolchand. A composition for preparing hot and cold drink. Boiling powdered poppy scales, mixing the boiled water with ferrous sulphate solution and then treating grain husk with this solution, thereafter mixing boiled poppy scale powder, trical powder and cinnamon powder.

51692. American Cyanamid Company. Improvements relating to the production of a new antibiotic, designated as tetracycline and to salts thereof (September 12, 1953.) Comprises hydrogenating chlortetracycline.

51693. Holding Intercito SA. Method of and apparatus for the fabrication of endless metal rods from metal powders. A tubular member of heat-resistant dielectric material arranged in a vertical portion is subjected to periodic vibration and continuously charged with metal powder from its upper end.

51694. British Cleanese Limited. Improvements in the production of artificial fibres. (April 24, 1953.) Fusible filament-forming material is pressed against a heated plate having orifices and the filaments coming out of said orifices are collected.

51695. Soberma (Societe de Brevets, d'Etudes et de Recherches pour le Magnesium.) New process for the production of magnesium. A magnesium containing compound like dolomite is acted upon by iron or its alloy having a predominant content of iron, in the presence of a metallic sulphide, at high temperature and in vacuum.

51696. British Insulated Callender's Cables Limited. Improvements in or relating to insulated electric cables and impregnating compounds therefor. (April 30, 1953.) The impregnated compound includes as a partial replacement of the micro-crystalline petroleum wax a low dielectric loss synthetic wax having a melting point 85—120°C.

51697. John Harper & Company Limited. Oil stove. (April 25, 1953.) Wick carrier is in the form of a tube encircling the wick and is axially adjustable in relation to inner and outer burner tubes.

51698. The English Electric Company Limited. Improvements relating to inductive windings. (April 29, 1953.) Consisting of one or more groups, each

group consisting of a plurality of pairs of annular sections, one section of each pair having its conductors spiralling inwardly and the other having its conductors spiralling outwardly.

51699. Ciba Limited. Manufacture and use of complex iron salts of nitrilo-triacetic acid. Reacting ferric salt and alkali metal or ammonium salt of nitrilo-triacetic acid, neutralising the product and evaporating to dryness.

51700. Cognate with appln. No. 49755.

APRIL 15.

51701. Miss Razia Osmani, D. S. Datar and S. H. Zaheer. Production of sulphur dioxide from calcium sulphate. Calcium sulphate is heated with sodium sulphate and bauxite.

51702. Automatic Telephone & Electric Company Limited. Improvements in electrical transmission networks. (May 6, 1953.) Method of neutralizing stray capacitances consists in modifying the values of capacitances in the network to absorb adjacent stray capacitances and substituting equivalent sections for such elements in the original network as are incapable in their original form of absorbing adjacent stray capacitance.

51703. K. R. Vithal. Improvements in or relating to brassiers or like garments and to fasteners thereof. One of the end strips being attached to a detachable fastener comprising a piece of elastic material having at one end a buckle and the other end a hook.

51704. B. B. Chitgupi. A key board for manufacturing a typewriter for Kannada script. A Kannada typewriter keyboard in which the characters can be typed in the manner in which they are normally written.

51705. Esso Research and Engineering Company. Process for improving catalyst activity. Treating catalyst with an oxidizing agent and aqueous inorganic-non-metal halide.

51706. J. D. Arrault. Fencing element, particularly applicable to animal parks. (March 26, 1954.) A support provided with rotary defensive members.

51707. Dr. E. Hartleb. Mobile equipment for the treatment of water with chlorine gas. A plurality of mixing and dispensing devices and a plurality of pumps connected in series are combined in a mobile arrangement.

51708. Standard Telephones and Cables Limited. Improvements in or relating to telecommunication exchange systems. (April 17, 1953.) Comprises a group of substations line circuits, metering signal transmitting equipments, scanning devices and pulse generators.

APRIL 17.

51709. Void.

51710. S. N. Gundu Rao and V. V. Lonkar. Vacuum pan crystalliser. Comprising a cylindrical shell fitted with a central rotatable shaft provided with stirrer arms.

51711. The Champion Paper Company Ltd. Method and apparatus for coating paper. Continuously applying a webbed excess of fluid coating material to a rubber-covered roller, removing the surplus coating and transferring the remaining onto a moving paper web.

51712. American Cyanamid Company. Improvements relating to the preparation of novel benzophenones and resinous compositions comprising the same. (March 8, 1954.) By condensing in the presence of a catalyst a di-substituted benzoyl halide.

51713. G.N.R.D. Patent Holdings Limited. Improvements in the preparation of 11-oxygenated steroids. (April 28, 1953.) Dehalogenating halogenated 11:12-epoxysteroid, treating the product with hydrohalic acid and dehalogenating the 12 α -halo-11 β -hydroxysteroid thus obtained after oxidation of 11 β -hydroxy group.

51714. Douglas Fraser & Sons Limited. Apparatus for feeding sliver from rolls to cards, drawing frames, spinning frames or the like. The partitions are each mounted in pin and socket connection with at least one supporting member in such wise that each partition may be placed in operative position and removed therefrom.

APRIL 19.

51715. Void.

51716. Void.

51717. I. Stoller. Improvements relating to applicators for tubular bandages. Comprising a plurality of resilient fingers or the like connected together at one end adapted to carry a length of tubular bandage around them.

51718. Dunlop Rubber Company Limited. Sponge rubber cushions and half cushions. (April 24, 1953.) Containing regular network of ribs

defining a regular pattern of cavities extending inwardly from its base.

51719. Microcell Limited. A. E. C. Denovan, D. J. Hodgson and H. Kremer. Improvements in or relating to projectors for guiding the initial path of missiles. Comprising of a tube of reinforced synthetic resinous plastic material.

51720. Microcell Limited. A. E. C. Denovan, D. J. Hodgson and H. Kremer. Improvements in or relating to pressure vessels. Vessel made of synthetic resin having affinity for glass fibre and having glass fibres incorporated therein as a reinforcing agent.

51721. Sir James Farmer Norton & Company Limited. Improvements in wire drawing and winding machines. (April 28, 1953.) Comprising a wire drawing block, means to revolve the same, a wire collecting block to be driven in unison with drawing block to receive coils of wire, the collecting block being removable from its service position.

51722. A. Talalay, W. D. Coffey and J. A. Talalay. Improvements in and relating to cellular products comprising rubber and to methods of making the same. (October 13, 1953.) A deposit of stiffening material upon the internal cell wall surface of the individual cells.

51723. The Vitarama Corporation. Apparatus for controlling the intensity of illumination of projected images. Provision of a rotatable grid at the light path of the projector intercepting varying amounts of light.

51724. The Vitarama Corporation. Apparatus for synchronizing the operation of film strip apparatus. There is provided a phase adjusting device which permits regulated unit to be independently advanced and automatically maintained.

51725. Ciba Limited. Process for the manufacture of new carboxylic acid amides. (April 20, 1953.) N-(2-oxyhalophenyl)-salicylic acidamides are prepared by known methods by reacting a suitable arylamine with a suitable aryl acid derivative like a halide or an ester.

51726. E. C. E. Hemsted. Improvements in and relating to fibrous materials used as carriers for chemicals in medicine and surgery and more especially for tampons and the like. Comprising a plurality of kinds of

soluble fibrous materials of different characteristics combined in prearranged proportions.

51727. J. B. Ratelband. Improvements in and relating to valves. Flow passages are formed by circular grooves extending to ribs provided on the annular wall of the insert member.

51728. Waagner-Biro Aktiengesellschaft and Vereinigte Oesterreichisch Eisen Und Stahlwerke Aktiengesellschaft. Process for cooling and utilising the heat of waste gases. (August 18, 1953.) Heat from waste gases is recovered and made to perform useful work.

51729. Pest Control Limited. Fungicidal preparations containing a basic copper salt and manufacture of said preparations. (April 24, 1953.) Comprising alkaline earth metal carbonate particles each coated with a continuous film of a fungicidal basic copper salt.

51730. Creed and Company Limited. Facsimile apparatus. Comprising a stylus mounted to move in a fixed path over recording or transmitting paper placed in pressure contact therewith and guiding and supporting means for said paper at such distance from the stylus path that the paper forms a resilient cantilever and the pressure contact is maintained by the natural resilience of the paper.

51731. Creed and Company Limited. Stylus grinding and driving mechanism in facsimile recorder. Comprising flexible belt, means for actuating it in a scanning path stylus assembly including a magnetisable member affixed to said belt and elongated permanent magnetic track adjacent to the scanning path in magnetic relationship to the stylus assembly to attract it into engagement therewith.

51732. S. Takakita. Plough. Having its upper portion bent forwards so that its centre of gravity is in lower portion.

APRIL 20.

51733. M. M. Baker. Apparatus for use in the making of ice blocks, frozen confections and the like. Means are provided for interchanging warming agent for coolant in the chamber around the mould.

51734. U. Bellometti. Process and apparatus for manufacturing tubes, tanks and hollow bodies generally from metal in sheet or band form. Bending sheet

metal to cause its edges to abut, joining together the edges, supplying fluid pressure into the tube, closed at both ends by plugs, to convert the tube to a circular section and then size the tube by shaping it against inner surface of mold.

51735. Morgardshammars Mek. Verks-tads Aktiebolag and C. Spingerverk. A device for preventing pig tails and doubled tail ends from arising when rolling with repeaters in looping mills. Comprising a whip channel connected to the rolling mill the whip channel being provided with a series of semi-circular flanges placed one after the other in the same plane.

51736. Morgardshammars Mek. Verks-tads Aktiebolag. Improvements in or relating to rolling mills. Consisting in the combination with a finish stand of shears, a cooling bed, guide means and switch means.

51737. RO-SEARCH, Inc. Method of and device for the manufacture of footwear and footwear so manufactured. (May 12, 1953.) Comprising positioning upon a last on upper provided with a welt and thereby presenting a welt crease placing said welt crease into the desired final position and molding and vulcanising a layer of rubber to said welt.

51738. The Monotype Corporation Limited. An improved method of an apparatus for making corrections, alterations and additions on a photo-type composed film or sheet. Comprising cutting emulsion-bearing component of stripping film around required matter, positioning a transfer strip and adhesively attaching the cut-out portion to it, stripping off portion to be replaced and applying the transfer strip to the film so that the required matter bearing portion of stripping film occupies the space vacated by the portion of the original film removed.

51739. The Globe Company. Reticulated sheet material and the method of and apparatus for making the same. Comprising a plurality of continuous corrugated strips extending between opposite sides of the sheet with the plane of each strip normal to plane of the sheet, juxtaposed strips defining there between a plurality of diamond-shaped openings.

51740. Patents and Investments Limited. Improvements in drawing dies. (May 26, 1953.) Leading surfaces for dies

are curved longitudinally, and have a convex curvature in transverse direction.

51741. Ortho Pharmaceutical Corporation. Ferrous calcium citrate complex. Adding metallic iron to a solution of monocalcium citrate.

51742. Void.

APRIL 21.

51743. Scammell Lorries Limited. Improvements in and relating to motor road vehicles. Torque reaction links and springs have their outer ends attached to the axle casings by ball type assemblies and their medial parts to vehicle frame by lateral floating central fulcrum mountings.

51744. Pertrix-Union GMBH. Waterproof and shockproof galvanic element especially a rod battery. A metal beaker with a base is put over the zinc beaker and the electric contact is soldered with the metal cap.

51745. Scottish Machine Tool Corporation Limited. Profiling attachment for metal-working machines. Comprising a base attachable to machine, a movable part slidable on the base, and at least one tool holder supported by movable part, the tool holder carrying a cam follower engaged with a cam adapted to be coupled to the feed screw.

APRIL 22.

51746. Void.

51747. The Chairman, Indian Tea Association. Improvements in and relating to trays and like receptacles, such as are used for conditioning or storing commodities. Combination of tray, guide means therefor to slide along means secured to tray and engaging underneath the tray supporting surface of guide means engagable with further means to prevent separation.

51748. Colgate-Palmolive Company. Oral chlorophyll preparations. Comprising a water soluble chlorophyll compound and a higher aliphatic acid amide of an amino carboxylic acid compound.

51749. H. W. B. Webb. Device for controlling the flow of liquid under pressure. (April 30, 1953.) Air or gas pressure applied to the surface of the liquid in the chamber so that the flow of liquid is varied accordingly.

51750. H. W. B. Webb. Improvements in water heaters and steam generators.

(April 30, 1593.) Tube assembly formed by a plurality of detachably interconnected and performed individual tube structure arranged in one or more groups.

51751. Bharat Sheet Metal Industries Limited. Improvements in or relating to drums or like containers made of sheet metal. Drum is formed by rolling sheet metal piece, the opposite ends of the sheet metal piece being joined by internal welding.

51752. E. J. Penfold. Improvements in or relating to air conditioning apparatus. (April 23, 1953.) A damper controls proportion of fresh air entering the device.

APRIL 23.

51753. Dr. R. S. Dubey, S. S. Mavi and Dr. D. N. Daruvalla. Improvements in cane juice clarification for white sugar manufacture. Consisting of defecating the raw-juice with milk of lime separating the mud subjecting the juice to sulphitation.

51754. Void.

51755. B. Girette. Improvements in or relating to automatic sector gates. Board rotatable about an axis by means of supporting frame structure comprising arms and counterweights, container or float integral with the structure, partly immersed in one water level, in communication and supplied by another water level through its bottom.

51756. Standard Telephones and Cables Limited. Radar observation training device. (May 15, 1953.) Consisting of a viewing screen scanned by a beam of ultra violet rays, a carrier of luminescent target-image located adjacent said screen to intercept said beam and means for moving said carrier parallel to said screen.

APRIL 24.

51757. Continental Can Company Incorporated. Art of making closure seals by molding and curing. Comprises a crown shell, depositing a measured quantity of semi-liquid pasty mass, heating the mass and pressing a heated shaping surface upon the mass.

51758. Continental Can Company Inc. Method of forming closure caps by molding and partially fluxing a paste resin composition with subsequent final fluxing thereafter. Comprises depositing at a temperature of fluid flow into a crown shell, a measured quantity

of resin paste, pressing a heated shaping surface against the deposit.

51759. The British Electric Traction Company Limited and Thomas Ash & Company Limited. Improvements in and relating to braking systems for vehicles. (May 15, 1953.) A foot brake switch through a solenoid closes and opens a valve provided in the exhaust conduit of the engine.

APRIL 26.

51760. Takeda Pharmaceutical Industries Limited. Derivatives of 2-keto-2, 3, 4, 5, 6, 7, 8, 10-octahydro-naphthyl-(7)-methane and a process for preparing the same. 2-Keto-2, 3, 4, 5, 6, 10-hexahydronaphthalene or 2-keto-2, 3, 4, 5, 6, 7, 8, 10-octahydro-naphthalene is reacted with a methane derivative $\text{Y}_Z > \text{C}(\text{H})\text{R}_2, \text{R}_2$ being a hydro carbon substituent or hydrogen Y and acyl or carboxyl group and Z hydrogen atom or a residue convertible into hydrogen.

51761. Void.

51762. Continental Can Company Inc. Production of closure seals by partially curing, shaping, and completing the cure. Depositing a measured quantity of heat-transformable non-volatile material, heating it and then pressing it by a shaped plunger.

51763. Continental Can Company Inc. Production of closure seals by partially curing a cushion material, and thereafter shaping and completing the cure. Depositing a measured quantity of heat-transformable non-volatile material in a closure shell, heating it, pressing it by a shaped plunger into a contour of sealing.

51764. British Telecommunications Research Limited. Improvements in or relating to electrical switching devices. (April 28, 1953.) Comprises a rotatable disc with groups of depressions for metallic balls which co-operate with plurality of contacts.

51765. British Artificial Resin Company Limited. Improvements relating to the moulding of thermosetting resinous compositions. (May 18, 1953.) Pre-heating a mixture of a resin and ammonium citrate with or without a discrete material and further heating under mechanically applied pressure.

51766. D. H. Lee. Improvements in and relating to bar gripping means for use

in the production of prestressed concrete (May 12, 1953.) Collar accommodating axially within it prestress bar and bar encircling wedges and having cylindrical co-axial threaded surface, one surface being disposed radially inwardly of the other.

51767. Texaco Development Corporation. Improvements in or relating to reciprocating internal combustion engines. Fuel injected from a height above piston top dead centre of $1/2$ to $1/3$ means clearance between piston and head, in a direction tangent to circle coaxial with cylinder and of radius of 25 to 50 per cent cylinder radius, starting fuel injection before top dead center approximately $1/2$ injection duration plus 5 to 20 crank angle degrees.

51768. The Sharples Corporation. A process for treating a gum-containing fatty oil to condition said oil for refining. Admixing with the oil small amount of sodium hydrosulphite.

51769. Acrow (Engineers) Limited. Improvements in or relating to scaffolding. Cross bar for connecting uprights with brackets attached to ends for clamping ledger, and with short tubes to embrace upright; cross bar set at selected level with short tubes resting on selected laterally projecting abutments on uprights.

51770. H. Krug. Improvements in and relating to internal combustion engines, more particularly diesel engines. [Addition to No. 50869.] With a combustion space having the form of body of revolution and lying in the piston and with eddying of the combustion air around the cylinder axis.

51771. Electrolux Corporation. Dust containers for vacuum cleaners. Consisting of an air permeable dust filtering outer layer in the form of a bag having an opening to receive an inlet conduit at one end and enclosing primary filtering material.

51772. T. M. M. (Research) Limited. Improvements in textile combining and other machines. (July 29, 1953.) Subjecting the slivers simultaneously to a single drawing operation performed by passing the slivers side by side through two successive pairs of rollers rotating at constant speed, the second pair having a surface speed higher than that of the first.

APRIL 27.

51773. H. S. Sidhu. Improvements in or relating to paperweights or the like. The paper-weight consists of two coacting body members which when assembled together constitute a hollow enclosure which accommodates an inexpensive filling material.

51774. H. S. Sidhu. Improvements in or relating to lamp stand or the like. The tubular body member is formed of a member of coacting ring like sectional members constituting a composite body member.

51775. N. V. De Bataafsche Petroleum Maatschappij. Process and apparatus for distilling liquid mixtures. A part of liquid on draw off tray is used to withdraw heat and to produce reflux for part of the column lying underneath.

51776. Infilco Incorporated. Improvements in or relating to apparatus for slurry type liquid treatment. An elongated tank, an inlet for liquid to be treated partition means and a rotor.

51777. The Firestone Tire & Rubber Company. Improvements in or relating to tire construction. Comprising parallel zigzag ribs in the central area of the tread and a circumferential series of longitudinally spaced shoulder bars.

51778. Casablancas High Draft Company Limited. Improvements in reducing collectors for textile fibre drafting mechanism. (May 12, 1953.) Incorporating stop means for limiting the collector traverse, the collector body being channelled through one edge, between guide surfaces which incline towards the channel base.

51779. A. G. Heron. Improvements in or relating to flexible hoses (May 5, 1953.) Associating with the hose is a conductor adapted to be connected to low voltage secondary side of a step-down transformer so that any desired wattage can be introduced into the conductor.

51780. Anglo-Scottish Creameries Limited. Improvements in agents for improving foodstuffs. (August 8, 1952.) [Divided out of No. 49994; ante-dated to July 28, 1953.] The agent consists of (a) one or more lactones of an aliphatic hydroxy carboxylic acid having a lactone ring of 4-6 carbon atoms incorporated in an ingredient of the foodstuff or (b) at least two such lactones without the ingredient.

51781. Sandoz, A. G. Process for the preparation of derivatives of D-lysergic acid. Condensing an azide $R-CO-N_3$ where R stands for D-lysergic acid or D-isolysergic acid residue, with ethylamine.

51782. RUMIANCA Societa per Azioni. Production of alkali metal hydroxides. Causing the amalgam to flow vertically through a decomposition zone to which water is co-currently fed and thereafter causing the amalgam to flow through a horizontal decomposer in which it is counter-currently contacted with water.

APRIL 28.

51783. Amrit Banaspati Co. Ltd. Improvements in or relating to be bleaching and hydrogenation of cottonseed oil. During hydrogenation of cotton seed oil, the final traces of colour are removed by effecting the hydrogenation in presence of active carbon and activated fuller's earth.

51784. Imperial Chemical Industries Limited. Improvements in or relating to a method for insolubilising artificial filaments, threads fibres and the like obtained by the spinning of solutions of proteins. (April 28, 1953.) Impregnating the filaments with an acidified solution of formaldehyde, drying the filaments at below $100^{\circ}C$ and then heating them at above $130^{\circ}C$ till the filaments are insolubilised.

51785. Imperial Chemical Industries Limited. Improvements in or relating to a method for insolubilising artificial filaments, threads, fibres, and the like obtained by the spinning of solutions of proteins. (April 28, 1953.) Impregnating the filaments with an acidified solution of formaldehyde, drying the at below $100^{\circ}C$ and then heating at above $130^{\circ}C$, until the filaments are insolubilised.

51786. The Carborundum Company Limited. Improvements relating to the superstructure of tunnel kiln cars. (May 29, 1953.) Of the type comprising a number of pillars supported and located on the car base with each pillar formed of a number of superposed parts and with supports for setter tiles or bats at desired heights.

51787. Gresham and Craven Limited. Improvements in vacuum brake ejectors. (June 15, 1953.) Rotary member

allows air valve to close and open communication between the vacuum space and train pipe.

51788. United States Steel Corporation. Mechanical accumulator for accumulating strip material in strip processing lines. Consisting of a stationary frame, a plurality of main stationary rolls, a carriage movable toward and away from said stationary rolls and a plurality of main rolls mounted on said carriage, at least part of said rolls being narrow-bodied rolls.

51789. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to devices for automatic telephone exchanges. Provided with an indicator common to all direct exchange line transmitters to be controlled by the operator selecting means.

51790. Sandoz A. G. Process for printing textile materials. By printing with a medium based on aqueous viscose solutions containing dyestuffs, the prints then treated to convert the soluble viscose into insoluble cellulose.

51791. Dr. E. Hartleb. Method for the treatment of water with gaseous chlorine. Expanding compressed chlorine gas mixing the said expanded gas with air subjecting the gas air mixture to a centrifugal force and then impinging the mixture against water.

51792. The Metal Box Company Limited. Improvements in or relating to dispensing containers. Comprising a neck and a hood the neck having a plurality of widely spaced parallel ribs disposed longitudinally of it each shorter than its length and an inward formation of the hood disposed to snap under the ribs.

51793. Algemene Kunstzijde Unie N. V. Cigarette filter, and tow from which the cigarette filter may be cut. Comprising a piece of tow of substantially parallel filaments of regenerated cellulose and of porous nature having a rough, crimpy surface.

51794. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of substituted tropic acid $N-(\gamma\text{-picolyl})\text{-amides}$. Reacting a tropic acid halide with an alkyl- $(\text{-picolyl})\text{-amine}$, the alkyl radical of which contains 3 or 4 carbon atoms.

APRIL 29.

51795. (Mrs.) Hedwig Alice Wallimann, nee. Hunziker. Improvements in and

relating to rotary engines, pumps, blowers or the like. Stationary drum surrounded by eccentric rotary casing; slidable vanes in casing contacting the drum dividing the crescent shaped space into sealed compartments; rockable inserts in vanes facing the drum and parts in drum for supply and discharge of working medium.

51796. J. S. M. Chesa. Process for the manufacture of multi-colour lipsticks. (October 20, 1953.) Removable means are inserted into the hollow of a lipstick mould to divide the hollow space into a plurality of moulding spaces, the spaces are then filled with lipstick pastes of different colours, the means are removed and the pastes bonded together to give a multicoloured lipstick.

51797. T. Ashurst. Improvements relating to the stemming of shot holes in blasting operations. Comprising two solid members engaging one another slidably on complementary surface in wedge-like fashion.

51798. The Benjamin Electric Limited. Improvements in or relating to electric lighting fittings. Through reflector is secured to a channel member by two or more screwed rods and wing nuts, means being provided on the rods to co-operate with spring means on the respective wing nuts to maintain the wings of the nuts in alignment.

APRIL 30.

51799. Gresham & Craven Limited. Improvements in the steam brake valves of locomotives and the like. (June 15, 1953.) The passage of steam to the steam brake cylinder is controlled by a pilot steam valve through an arrangement of two diaphragms on a common spindle.

51800. G. B. Jacobsen. Oblong toy building block. Provided with lateral projections and recesses constituting interengagement elements arranged in sets disposed along different generatrices of the block.

51801. Anstait Fur Montage-Technik. A tubular large chisel for mechanical driving in of anchoring means and anchoring means to be driven in by such large chisel. Supporting device having tube gripped by hand and an impact-operated striker guided therein, and with a flanged foot and with two guides one guiding one end of anchoring pin

and the other one abutting shaft surface near the other end, namely the tip of it.

51802. Stab!l Internacional S. A. Process for stabilizing milk, its liquid derivatives such as cream, and preparations containing milk such as coffee, and installation for carrying out the process. The liquid is placed in a container at a temperature lower to that of its boiling point at normal pressure, a vacuum is created in the container until ebullition is obtained, the container is closed and subsequently heated to sterilize the liquid.

MAY 1.

51803. V. P. Asar. Improvements in or relating to built up boards. Core comprises series of wooden strips of small width separated from each other.

51804. Void.

51805. E. K. Conradty, P. Conradty, M. Conradty and C. Conradty. Improvements in or relating to anode carbons for high-power arc lamps. Comprising two high-power cores kept side by side, parallelly, in a non-circular carbon covering and separated by a narrow web of the material of the covering of thickness of atleast 0.2 mm.

51806. Sandoz Ltd. Improvements in or relating to the production of therapeutic compositions. (August 7, 1953.) Mixture of organic calcium salt and an anti-histamine 1-methyl-4-amino-N-phenyl N'-(2-phenyl)-piperidine.

MAY 3.

51807. Perfogit Societa per Azioni. Process for obtaining pure pre-polymerization products of 11-amino undecanoic acid. Amino undecanoic acid is heated with water, water being removed from the amino undecanoic acid as it is separating during operation.

51808. Acrow (Engineers) Limited. Scaffold member. Scaffold member with a putlong space at one end and at the other end means for connecting it to an upright at different levels along the latter and for damping a ledger to it.

51809. Laporte Chemicals Limited. Improvements in or relating to the purification of anthraquinone solutions. (May 4, 1953.) A solution containing tetrahydroanthraquinol in a solvent is contacted with a metallic hydroxide solution, the hydroxide solution is subjected to treatment with oxygen and the quinone isolated.

51810. Ciba Limited. Manufacture of 17 α -hydroxy steroids. Enzymes produced by aerobic cultures of fungi of the order Moniliales are caused to act upon compounds of the pregnane series.

51811. Ciba Limited. Manufacture of new pyridazine carboxylic acid esters. 1, 4-dihydro-4-oxo-1-R pyridazine-3-carboxylic acid, in which R represents an unsaturated heterocyclic monocyclic residue, or derivative thereof is reacted with an alkanol, a functional derivative thereof or with a diazoalkane.

51812. Jenson and Nicholson (India) Ltd. Improvements in or relating to rollers for applying paint. Comprising an open ended cylinder having a textile, felted or pile fabric firmly secured on its outer surface and its open ends covered with flanged discs a road of the handle may be passed.

MAY 4.

51813. Adinath Bhaduri. An automatic machine for rewinding paper, linen, cloth, yarn, films etc. in rolls of desired length. Comprising a feed roll, one or more guide rolls, a removable rewinding spool, driving means for rotating the rewinding spool and a control pinion carrying a stop pin, a set of levers operated by the said pin at intervals to stop the driving means.

51814. W. H. Miner, Inc. Friction shock absorbing mechanisms for railway draft riggings. Column of units stabilized by a plurality of centering or aligning followers slidingly guided within casing.

51815. British Ropes Limited. Improvements in or relating to ropes and the like. (May 5, 1953.) Impregnated with plastic which when set to a solid is flexible over a wide temperature range.

51816. K. T. Achaya, S. A. Saletore and S. H. Zaheer. Improvements in or relating to the recovery of fatty acids from oil foots. Mixing crude acid with urea or thiourea, separating urea-fatty acid complex and regenerating fatty acid.

51817. Davey, Paxman & Company Limited. Improvements in or relating to rotary vacuum filters. (May 26, 1953.) Suction filter having a hammer device for patting the filter cake on the rotary drum.

51818. Dunlop Rubber Company Limited. Composite articles of rubber and tex-

tiles. (May 8, 1953.) Void after publication. Applying to the textile an aqueous solution of phenol and then treating the same with a natural or synthetic rubber containing an aldehyde capable of condensing with the phenol and vulcanising the product.

51819. The Wellcome Foundation Limited. Injectable solution of digoxin. By dissolving digoxin in a solvent mixture of propylene glycol, water and ethanol.

51820. Void.

51821. Standard Telephones and Cables Limited. Improvements in or relating to storage of electrical intelligence. Signal storage equipment includes number of stores, recording means, a comparator and means for performing an operation in respect of a store wherein the comparator finds a predetermined relation between an identification signal and a control signal.

51822. Standard Telephones and Cables Limited. Improvements in or relating to subscriber billing in automatic telecommunication exchange systems and the like. (May 22, 1953.) Call accounting information relative to each connection is accumulated first in a store having no numerical relation to the substation liable for the connection and then transferred to another store which has a numerical relation to the said substation.

51823. Societe Des Laboratories Labaz. Improvements in or relating to a derivative of carnitine. Dicarnitine dichloride is prepared by heating under pressure at a temperature of 100—140°C for about 10 hours a hydrochloric acid solution of β -hydroxy α -trimethylammonium chloride butyronitrile.

51824. Void.

MAY 5.

51825. Void.

51826. D. Napier & Son Limited. Improved gas producing apparatus. (May 12, 1953.) Exhaust gases from a turbine and are of the two compressors are mixed and discharged.

51827. The National Smelting Company Limited. Improvements in or relating to smelting of metalliferous materials in a blast furnace. Air blown into blast furnace is preheated to such an extent that a reducing environment is maintained at a temperature high enough to reduced and volatilise zinc.

51828. The Parker Pen Company. Writing instrument [Divided out of No. 49047; ante dated to February 24, 1953.] Comprising an ink reservoir, a reciprocable writing unit and a pump actuated by the reciprocation of said writing unit.

51829. Sterling Drug Inc. Process for the preparation of acylated 3, 5-diaminopolyido benzoic acid. (May 5, 1953.) Treating a 3-amino-5-lower alkanoyl aminodiodo benzoic acid with a lower alkanolic acid or a derivative thereof.

51830. Mentmore Manufacturing Co. Limited. Improvements in or relating to writing instruments having a retractable writing point. (May 6, 1953.) Comprises tubular casing housing cartridge carrying writing point, spring to urge said cartridge in and out of casing axially displaceable and rotatable element to engage cartridge and stop means to support said element.

51831. Kugelfischer Georg Schafer & Co. Oscillating sleeve for spinning spindles. The spindle sleeve is manufactured from seamless drawn tubular stock by non-cutting forming operations.

51832. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of propynyl-carbinols. Reacting a propynyl halide by means of a zinc reaction with a ketone of the formula $R-CO-R$.

MAY 6.

51833. International Kenmore Limited. Process and machine for continuously electroplating wire and similar strip material. A stiff wire is continuously work hardened, formed into helix and run at high speed through a series of treatments.

51834. Ciba Limited. Pharmaceutical preparations containing new pyridazines. [Divided out of No. 49164; ante-dated to Dec. 28, 1953.] The preparation comprises a diether of 3:6 dihydroxy-pyridazine substituted in the 4 and 5 position with aliphatic, aromatic or araliphatic residues with a pharmaceutical carrier.

51835. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De St. Gobain, Chauny & Cirey. Improvements in or relating to electrical connectors for domestic electric resistance heaters. Comprising metal base with inner face soldered to resistance

element and an integral tongue projecting from the outer face and having a free end to slidable receive a sleeve fastened to an electric wire, the tongue being reduced in cross-sectional area a short distance from the base to weaken the tongue.

MAY 7.

51836. Void.

51837. Wingfoot Corporation. Improvements in reinforced latex foam rubber sponge. Includes forming a thermosetting resin comprising a phenol and an aldehyde producing agent.

51838. Wingfoot Corporation. Improvements in or relating to filters for the removal of dust particles from a gas passed therethrough. A filter including a gas pervious mat made of superposed layers of an organic material.

51839. Vono Limited. A method of packing spring assemblies and apparatus therefor. (May 9, 1953.) Compressing rows of springs simultaneously and folding the rows of springs simultaneously about the lines of the connecting means which connect the rows of springs.

51840. M. Vaugh. Improvements in or relating to reciprocating pumps. Piston reciprocated by handle constituting one arm of a bellcrank lever, other arm of which is a grooved quadrant and which is pivoted at its apex by the side of the pump.

51841. M. Vaugh. Improvements in or relating to pistons of reciprocating pumps. Two plates having mating surfaces at an angle to face of piston and cylinder walls and flexible ring of rubber or other material clamped between the plates.

51842. M. Vaugh. Improvements in or relating to valves of reciprocating pumps. Valve seat and valve proper with matching peripheral surfaces so that rubber disc between them makes contact over narrow surface approximating to line contact.

MAY 8.

51843. Void.

51844. Societe Des Usines Chimiques Rhone-Poulenc. Improvements in Process for the catalytic oxidation of acetone. (May 8, 1953.) The process is characterised in that the volatile products are permitted freely to escape from the reaction mixture.

51845. J. R. Geigy A.-G. Basic derivatives of 2-aryl indoles. Reacting phenyl indole with 2-chromethylimidazoline

51846. Void.

MAY 10.

51847. Council of Scientific and Industrial Research. A process for the manufacture of copper ruby glass. Wherein copper compound is reduced to the reducing stage and silicon is used as a reducing agent.

51848. Void.

51849. Saunders Valve Company Limited Improvements in or relating to diaphragm valves and diaphragms therefor. (May 13, 1953.) Characterised by axial section such that when diaphragm is free part of clamped margin continues the slope of the side of the cone.

51850. Brown and Root, Inc.. Process for the production of pulp from bagasse. Treating bagasse in a rotating vessel with steam under pressure, venting the vessel introducing an alkaline solution and steam into the vessel and cooking the mass under pressure.

51851. Dorr-Oliver Incorporated. Apparatus and method for the purification of liquids. (February 22, 1954.) The apparatus has a filtration chamber in which rate of filtration is controlled.

51852. B. Duval and R. S. Waddington. Improvements in or relating to means for withdrawing liquid from a container. Comprising a tube having liquid inlet, outlet ports and an air inlet for passage of air counter-currently to liquid flow in partitioned off interior container.

51853. Void.

51854. E. K. Cole Limited. Improvements in or relating to sound recording and reproducing device. (May 26, 1953.) Comprising humbucker coil connected in circuit with an operating coil of the device and adapted to be readily adjusted to a position in which the effect of electric currents induced in the operating coil from an interfering field is reduced.

51855. Ed. Geistlich Sohne A. G. fur chemische Industrie. New antituberculous compounds and process of preparing same. Interacting phosgene with isonicotinic acid hydrazide or its salts.

51856. Cognate to application No. 51467.

51857. The Wellcome Foundation Limited. Improvements in and relating to

the manufacture of acrylonitriles. (May 26, 1953.) Aryl-acetonitrile in which the 3 and 4 positions in the aryl nucleus may be substituted with halogen, is reacted with an ortho ester $R-CH_2-C(OR'')$, wherein R'' is alkyl group and R is hydrogen or alkyl group.

MAY 11.

51858. Aktiebolaget Svenska Metallverken. Improvements in or relating to the manufacture of cables. (June 3, 1953.) In which there are spool carriers, each having rotatably mounted therein at least two spools for wires, the spool carriers being easily attachable or detachable in relation to cable stranding machines in the plant.

51859. R. W. Simon and E. Tomson. Improvements in or relating to signal recording apparatus. Of the kind wherein a recording tape, film or the like is arranged magnetically or otherwise to receive signals or speech message for subsequent reproduction and in which a locking means serve to retain a selector control switch in one of several positions.

51860. Automatic Totalisators Limited. Doubles ticket issuer mechanism for race totalisators. (May 21, 1953.) Comprises first and second leg selector switches, first and second leg rotatable drums, circuiting and actuating means, locking devices and release mechanisms.

51861. W. Strikfeldt & Co. Method and apparatus for regulating the wall temperature in the melting zone of cupolas. Forcing a cooling liquid through cooling elements in the melting zone of cupola and maintaining working pressure for cooling medium at constant level corresponding to the desired temperature.

51862. Ateliers De La Motobecane. Improvements applied to elastic telescopic forks. The fixed bearing and guiding sleeves for its inner tube have play with respect to the fixed outer tube and clamped solely by axial grip.

51863. L. Szego. Frictionless comminutor. (May 13, 1953.) Of the type in which grinding is effected balls rolling between tracks formed on stationary and rotating rings respectively.

51864. Ciba Limited. Manufacture of new aminopyridazone-(6)-compounds. Taking an amino-pyridazone-(6)-compound containing a phenyl residue, an alkyl substituted amino group and a

group convertible into a lower aliphatically etherified hydroxyl group and converting this latter group into such hydroxyl group.

51865. Void.

51866. Ciba Limited. Manufacture of a new hydroquinone compound and pharmaceutical preparations thereof. Reacting para-quinone with ethyleneimine.

51867. The B. F. Goodrich Company. Improvements in or relating to method and apparatus for coating filaments of glass. Glass filament is advanced through a passage of capillary dimensions containing molten metal.

MAY 12.

51868. Rheinpreussen Aktiengesellschaft-fuer Bergbau und Chemie. Reaction apparatus for carrying out exothermic and endothermic gas reactions. (March 30, 1954.) The liquid heat transfer medium is passed in bundle of tubes disposed in the lower two third of the chamber.

51869. M. P. Bhargava. Improvements in or relating to processes for the production of pulp or cellulose from fibrous raw materials. [Addition to Patent of Addition No. 48905.] Producing cellulere or pulps from fibrous raw materials by alkaline or neutral reagents.

51870. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to cutting machine templates. (May 19, 1953.) A magnetic tracer roller is provided which is caused by magnetic field to adhere to the template edge, the template being made of wood or synthetic material.

51871. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to electric arc welding. (May 26, 1953.) Process includes applying direct current voltage to the field of the winding of the wire feed motor.

51872. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to electrodes for arc welding. (June 1, 1953.) Flux coated cores secured together to form composite electrodes by clips at intervals.

51873. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to the fusion joining of nickle alloys. (June 30, 1953.) Consists of calcium fluoride with at least one alkali metal silicate.

51874. Stothert & Pitt, Limited. Concrete mixing and weighing apparatus. (May 22, 1953.) Comprises a load skip, lifting gear, guide means and fluid pressure circuit.

51875. The General Electric Company Limited. Improvements in or relating to methods of growing quartz crystals. (May 15, 1953.) One or more quartz seed crystals are mounted within an enclosing vessel capable of withstanding high pressure and temperature, the vessel containing a mass of nutrient material and another volume of aqueous medium.

51876. Premier Electric Heaters, Limited. Improvements in or relating to temperature responsive electric switches and cut-outs. (May 13, 1953.) Consisting of a pair of switch contact members one of which is a moving contact member, a temperature responsive element and a displaceable switch actuating member.

51877. G. N. R. D. Patent Holdings Limited. Improvements in or relating to the preparation of steroid compounds. (May 21, 1953.) 21-acetoxy-2: 4-dibromo-17 α -hydroxy-3: 11: 20-triketopregnane is obtained by treating the corresponding 2: 4-dibromo compound with hydrogen bromide for over a period of 3 to 180 minutes.

51878. The Dow Chemical Company. Improvements in or relating to method of etching metal and etching bath therefor. An etching bath comprising of nitric acid, a dioctyl sulfosuccinate, diethyl benzene and a water-dispersible thickening agent selected from the group consisting of water soluble gums.

51879. Void.

51880. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of propynyl-carbinols. By reacting propynyl halide with ketone (R-CO-R') where R is ethyl and R' is methyl or ethyl groups and R, R' together from tetramethylene bridge.

51881. Motoren Werke Mannheim A. G. vorm. Benz. Abt. Stat. Motorenbau. Improvements in the cover for the casing of internal combustion engines. Cover for casing extending over entire width of crankcase and having conduits and filter for lubricating oil incorporated therein.

51882. Motoren Werke Mannheim A. G. vorm. Benz. Abt. Stat. Motorenbau. Improvements in internal combustion engines. Oil pump accommodate in

cover of crankshaft bearing shaped to form the pump casing.

51883. Motoren Werke Mannheim A. G. vorm. Benz. Abt. Stat. Motorenbau. Improvements in governors for internal combustion engines with fuel injection. Driving shaft and control rod of fuel pump only protrude into engine casing, governor of pump controls the rod by a single-armed and a two-armed lever connected together and accommodated in engine casing.

51884. Cooperative Verkoop—En Productievereniging Van Aardappelmeel En Derivaten "AVEBE" G. A. Process for fractionating starch into components with branched and linear chains. [Addition to No 48630.] Salt concentration of solution of starch in aqueous salt solution is increased after the separation of amylose until amylopectine precipitates without further cooling and separating amylopectine from the liquid.

51885. S. Anderson. Method and machine for shrinking knitted fabrics. The knitted fabric is introduced between two webs of helical springs running parallel with each other, said springs being contracted during their motion whereby knitted fabric is compressed.

51886. M. V. Chitale. Devices for use with cinematographic and television cameras. Comprising two fixed mirrors on both side of camera lens, and in between a pair of moving mirrors mounted one above the other on a metal bar fixed to a cam frame that moves up and down due to rotation of cam of the rounded equilateral triangle type.

MAY 13.

51887. Dr. Pijush Kanti Choudhury. Improvements in or relating to composite thermosetting resin and compositions containing said resin. Ground nut shell, saw dust, straw or like ligno-cellulosic material is digested with HCl at $35-80^\circ\text{C}$ and at atmospheric pressure.

51888. Void.

51889. Ruhrchemie Aktiengesellschaft. Process for the production of flexible waxes. Comprising chlorination hard paraffin to introduce more than 1 and less than 5 gram-atoms of chlorine per mole of hydrocarbon and dehydrochlorination of the product.

51890. Atmospheric Control Limited. Improvements in fluid and dust removing

systems for cotton and like carding machines. (May 20, 1953.) Comprising a filler box located at one side of the machine with means applying section to such box, ducts leading from said box to its forward and rear ends.

51891. The General Electric Company Limited. Improvements in or relating to electric capacitors. (May 20, 1953.) Thin layers of metal constitute two electrodes while the dielectric between the electrodes is a plastic material.

51892. The General Electric Company Limited. Improvements in or relating to electric capacitors. (May 20, 1953.) Thin layers of metal constitute the electrodes and the dielectric between them is a thermoplastic material.

51893. N. V. Bronswerk. Improvements in gas humidifying devices. Moisture is supplied to centrifugal ventilator having a blade wheel.

51894. N. V. Bronswerk. Improvements in air conditioning by means of super-saturated air. Air is cooled before supersaturation in such a manner that its heat content is decreased.

51895. Smitsvonk N. V. Low tension surface discharge sparking plug. With exchangeable sparking element, the plug body being provided with a central continuous exchangeable spindle, on the outer end of which the sparking element is fastened.

51896. Smitsvonk N. V. Jet engine, gas turbine oil burner boiler or similar installation with an electric ignition. Ignition apparatus operating with condenser charges and discharges and surface discharge sparking plugs, a number of sparking plugs is connected in parallel and with each spark plug an ignition condenser is series connected.

51897. Smitsvonk N. V. Low tension ignition system for jet engines, gas turbines, oil burner boilers and similar installations. Operating with condenser discharging through surface discharge sparking plugs, a sparking plug being placed in each combustion chamber and these plugs being connected in succession to the ignition condenser by rotating contact apparatus.

51898. R. Kauten. Device for the coating and treatment of the surfaces of bodies for the photo-mechanical production of printing forms. Chamber disposed in spaced relation to the surface to be coated, which is moved past said channel, comprises in cross-section a

narrow outlet slot and a widened portion connected thereto below which the downwardly directed walls converge together.

51899. Bipinchandra Chandulal Shah. Improvements in or relating to top rolls in spinning. Roller is spacedly mounted on the arbour shaft through ball bearings.

51900. Bipinchandra Chandulal Shah. Improvements in or relating to comb box in carding machines in spinning. Imparting vibratory movement to the comb shaft in two stages of drive.

51901. Radio Corporation of America. Apparatus and method for recording or reproducing television type signals. The signals' including uniform periodic pulses, the relative phase of the pulses of such signals on the recording strip being compared with the phase of pulses from unrecorded signals for producing a voltage corresponding to phase difference between the recorded pulses and the unrecorded pulses, said voltage controlling the driving mechanism for the strip.

MAY 14.

51902. Demag Aktiengesellschaft. Process for the production of ferro-manganese. To pig iron obtained from blast furnace, air enriched with oxygen is blown, the metal and slag separated, slag subsequently treated for obtaining ferro-manganese.

51903. Monsanto Chemicals Limited. Improvements relating to herbicidal compositions. (May 18, 1953.) Comprising aliphatic or cycloaliphatic amines and chloroaryloxyalkyl carboxylic acids, the acids being in appreciably excess of the quantity equivalent to the amines.

51904. Bata Shoe Company Limited. Improvements in or relating to the manufacture of shoes or like footwear. Wherein the upper is permanently secured to the sole by means of an adhesive.

51905. James H. Lamont & Company Limited. Improvements in pipe coupling devices. Characterised in that back and flange within the nut has rearwardly tapering conical aperture of diameter greater than the pipe and revoluble ring therein form of bush is retained in annulus on expansion.

51906. Daimler-Benz Aktiengesellschaft. Improvements relating to pre-combustion-chamber diesel engines. Precombustion

chamber formed by insert in axial direction of vortex formed by tangential opening of transfer port into it; fuel injection nozzle opens in the same direction as vortex; insulating space between insert and cooled part of cylinder head.

51907. L. Jager. Fastening device for railway rails. Lower limb of the clamp spring is secured directly to the bearer plate by coach or sleeper screws that do not pass through the free upper limb.

51908. Societa Generale Pioggia arl., Allgemeine Beregnungsge-sellschaft m.b.H. Improvements in or relating to a method and apparatus for sprinkling, (October 21, 1953.) The interference of the liquid jet is caused by interference members, the active surfaces of which are arranged perpendicular to the plane of the jet, and the active surfaces cause the motion of the jet pipe across a sector of its turning movement.

MAY 15.

51909. Dr. H. Schrader and Dr. D. Jagat Ram. Beneficiation of manganese ore. Pretreating manganese ore by roasting in a reducing atmosphere of hydrogen, the reduced ore crushed and finally subjected to magnetic separation.

51910. Dr. H. Schrader and Dr. D. Jagat Ram. Compacting of manganese concentrates. Coal intimately mixed with manganese concentrate and subjected to high temperature carbonisation.

51911. J. L. Mulvaney. Improvements in or relating to production of structures or hollow and solid walls for general structural purposes. Interlocking building units assembled with large hollow space between faces of walls, and continuous vertically and horizontally in criss-cros manner; space filled by concrete with ducts or pipes arranged therein.

51912. Void.

51913. Graetz Kommandit-Gesellschaft. Spanner with adjusting-gauge. It's shaft having profiled steps formed as gauge sizes and the end of the shaft has a screw-driver-like step with a gap in its middle.

51914. Imperial Chemical Industries Limited. New process for dyeing wool. (May 20, 1953.) Treating wool with a solution of a chromable dyestuff and an alkali metal or ammonium dichromate with presence of a reducing agent.

51915. George Salter & Co., Limited. Improvements relating to spring balances. (June 26, 1953.) Movement of load-supporting part is transmitted to indicator by a part controlled by one of parallel motion members in such manner that it is caused to be tilted.

51916. H. Hutchinson. Improvements in or relating to fire extinguishing pistols. Having means for sealing both ends of barrel.

MAY 18.

51917. Dunlop Rubber Company. Adhesive butyl rubber compositions. (May 19, 1953.) Incorporating minor proportion of uncured vulcanisable butyl rubber composition in a cured crumb of same.

51918. The Firestone Tire and Rubber Company. Improvements in or relating to clamp for securing rim to disk in wheel construction. Clamp has surface-engaging portions positioned against radially extending surfaces on the wheel disc and have other surface engaging portions mould towards rims to engage complementary surfaces on rim.

51919. The Firestone Tire and Rubber Company. Improvements in or relating to tubeless tire and method of making same. Inside ply has a butt splice extending from bead to bead of the tire and the inside lining has a lap splice adjoining the butt splice.

51920. Norsk Hydro-Elektrisk Kvælstogaktieselskab. Filter thickening plant. Combination of an alternating valve with a liquid branch connected to the reverse side of the filter medium and two other liquid branches which can be interchangeably connected to the first mentioned branch.

51921. International Business Machines Corporation. Machine for forming a web from strips. (January 4, 1954.) Comprises a strip intercepting device, means for feeding strips, strip conveyor with a ram associated with it.

51922. International Business Machines Corporation. Converters for coded electric impulses. (January 8, 1954.) Comprises a storage matrix, input and output means and switching means for selective connection.

51923. The B. F. Goodrich Company. Improvements in or relating to pigmented organic plastics and method for preparing the same. Milling pigment

and plastic in liquid grinding medium comprising water, liquid organic water-miscible solvent and liquid organic water-immiscible solvent in which plastic is partially soluble.

51924. S. M. Shamsie. Improvements in or relating to cocks. Comprising threaded plug screwed into outer end of a housing, a rotatable valve spindle passing through said plug, a valve head at the end of spindle, said valve head engaging valve housing.

51925. Montecatini Societa Generale Per L'Industria Mineraria E Chimica. Process for the continuous manufacture of superphosphate and apparatus for carrying out said process. Phosphorite and sulphuric acid are mixed together under such conditions as to cause substantially complete evolution of gaseous fluorine products.

51926. Schlumberger Well Surveying Corporation. Apparatus for logging the formations traversed by a borehole. Comprising transducer and an electrode one of which establishing an electrokinetic phenomenon involving periodically varying mechanical pressure and electric potential and a phase detector responsive to electric signal at said transducer and to an electric signal as measured between said electrode and a reference point.

MAY 19.

51927. Void.

51928. Interlake Iron Corporation. Improvements in or relating to method and apparatus for charging a blast furnace. (March 25, 1954.) Materials are caused to enter the rotating hopper from each to the cars in a direction which is generally opposite to the direction of rotation of the hopper.

51929. Peterlite Products Limited. Improvements in and relating to sheet or block material producer by polymerisation and mouldings produced therefrom. Polymerising a mixture of polymerisable monomers, interrupting the polymerisation at a stage when a partially polymerised sheet or block is formed which is sufficiently stable and firm but is sufficiently plastic for shaping and moulding purposes.

51930. Societe De Fabrication D'Appareils De Cinematographie (en abregé Societe Facine). Swivel stand-base with locking means, notably for camera-gun. (February 18, 1954.) Comprising

- carrier formed with part-spherical bearing surface cooperating with conjugate partspherical bearing surface formed in a base flange supporting the carrier, the base flange carrying movable elements for adjusting carrier member and a pair of wedging members under a single control for urging the spherical surfaces against each other.
51931. Continental Can Company Incorporated. Art of making closure seals. A disc of thermo-adhesive composition is heated, shaped under pressure and cured after removal of pressure.
51932. Continental Can Company. Incorporated. Method and apparatus for making closure seals. Includes the steps of forming a curable elastic composition into a sheet, shaping the sheet to form a plurality of spaced cushion pads, curing the composition.
51933. Continental Can Company, Inc. Manufacture of closure seals having formed cushion pads therein. Includes the stapes of depositing a charge of plastic material, engaging a heated punch surface with the charge, providing a peripheral rib and holding the punch and rib surfaces engaged.
51934. Heckett Engineering Inc. Method and apparatus for disposing of slag and refuse from a steel making plant. Charging slag or refuse into slag pots which are pivotally mounted upon cars traversable along a track, extending from the plant to and alongside a pit, tilting the pots upon cars so as to dump contents into pit, removing first the skulls and other large metal pieces and then the residual dumped material.
51935. Heckett Engineering. Inc. Improvements in or relating to screening or sifting apparatus. Having a barrel of noncircular cross-section and which is disposed within rings which are concentric to the barrel and is reinforced by longitudinal beams which extend between the internal peripheries of the rings.
51936. Heckett Engineering, Inc. Transportable apparatus for recovering the usual ferrous-containing components of granulous materials. Comprises in combination or perforated open ended tumbler barrel, a main conveyor, a hopper mounted upon a chassis, a magnetic separator disposed between conveyor and the barrel end, the barrel being rotatable about its longitudinal centre line which is inclined to chassis.
51937. Dr. L. Thoria and V. P. Gohel. An improved process for the manufacture of bamboo pulp for use in the production of paper; rayon and the like. Bamboo chips are first treated with water, at a temperature ranging from 100°C to 190°C for a period of 1 to 10 hours.
51938. Standard Telephones and Cables Limited. Crystals and the method and means of manufacture thereof. Seed crystal is crystallised from molten metal and concentration of solute atoms is maintained constant during crystallisation.
51939. Standard Telephones and Cables Limited. Improvements in or relating to electrical selection equipment of the type used in automatic tele-communication exchanges. (May 29, 1953.) Comprises test equipments, inhibiting means and selective means.
51940. Bartrev Limited. Improvements in and relating to boarding. (May 20, 1953.) Subjecting a preheated mat of discrete fibrous material and thermo-setting binder having the moisture content at one or both of the mat surfaces substantially higher than that of the main thickness or core of the mat to compaction under pressure and heat.
51941. Chubb and Son's Lock and Safe Company Limited. Improvements in and relating to permutation locks. (June 19, 1953.) Includes operable snap-action means for controlling movement of the connecting lever from a position of disengagement towards a position of engagement, with the driver, and into engagement therewith.
51942. O. Schnyder. Heat recuperator for gaseous media. Heat transfer between low and high temperature duct sides is increased by having dividing wall of metal bedded in fusible ceramic mass.
51943. P. A. I. Cuvelier. Machine for washing, rinsing and drying clothes. Comprising a tank, a turbine carrier shaft, and centrifugal distributing and drying chambers.
51944. Ciba Limited. Process for the manufacture of new substituted piperidines. [Divided out of No. 49941: ante dated to May 19, 1954] Treating with a hydrogenating agent a substituted 2-diphenylmethyl-pyridine or a pyridinium compound thereof.
51945. Nederlandse Organisatie Voor ...Toegepast - Natuurwetenschappelijk

Onderzoek Ten Behoeve Van Nijverheid Handel En Verkeer. Process for the preparation of co-polymerizable unsaturated polyesters, for the preparation of co-polymers with these polyesters and for the preparation of lacquers with these polyesters as binding agent and objects which are at least partially made of co-polymers of these polyesters. Aromatic hydrocarbon or ether, a ketone or a halogenated aromatic hydrocarbon, formaldehyde and an unsaturated carboxylic acid are condensed in the presence of a catalyst.

MAY 20.

51946. Inventa A. G. fur Forschung und Patentverwertung. Method of continuously regulating the degree of crimping of a tow or cable of fibres. Comprising a pressure crimping device, a cutting machine, a servo motor and a quotient measuring device.

51947. Continental Can Company, Inc. Container closure seal with cushion pad having concentric ribs. Sealing pad of elastic material shaped and cured in closure shell has their central portion and multiplicity of concentric ribs alternating with grooves to contact container lip in application.

51948. Continental Can Company, Incorporated. Method of forming container closure seals having sealing pads therein. Depositing in internally vinyl-resin liquor coated closure shell a semi-liquid paste composition, heating to 350°—400°F to effect adhesion and pressing the same to form sealing pad.

51949. Lamson Paragon Supply Company Limited. Improvements in and relating to carbon transfer webs. Web is provided with an electrical circuit and a conducting means controlling the circuit.

51950. The British Tabulating Machine Company Limited. Improvements in or relating to calculating checking apparatus. (May 29, 1953.) Comprises means for feeding a record card through first sensing station, a punching station and a second sensing station, means for multiplying, dividing and comparing.

51951. The British Tabulating Machine Company Limited. Improvements in or relating to electronic calculating apparatus. (May 29, 1953.) Comprises means for storing a multiplier value, a multiplicand value, and a product value means for controlling the halving, doubling and selective addition cycles.

51952. The British Tabulating Machine Company Limited. Improvements in or relating to apparatus for transferring data between magnetic storage devices. (October 14, 1953.) Comprises a first and a second storage devices and provided with rectifiers and means for applying bias voltage.

51953. Void.

MAY 21.

51954. Rheinpreussen Aktiengesellschaft fuer Bergbau und Chemie. Process for the regeneration of iron catalysts. Treating at 200—400°C with less than 0.5 litres of O₂ per gram of catalyst per hour until carbon content is less than 0.8 per cent.

51955. Andre Rubber Company Limited. Improvements in or relating to resilient torsion joints. (November 17, 1953.) Rigid outer body of a cross-section of non-reentrant closed multilateral figure having number of sides which is an integral multiple of the number of sides of the rigid inner member.

51956. International Business Machines Corporation. Improvements in or relating to statistical record controlled sorting apparatus. (January 8, 1954.) Comprises means for feeding information tape, signal generators, means operable by such signals to write upon a record tape.

51957. Standard Telephones and Cables Limited. Means for determining on which of a number of conductors an electrical condition is applied. (May 29, 1953.) Utilising discriminating means for operating one of a number of detector devices by means of an operating electrical condition applied to a corresponding one of a number of conductors and lock-out equipment for ensuring that only one detector device effectively operates at a time.

MAY 22.

51958. Council of Scientific and Industrial Research. Manufacture of ethylene dichloride. By passing ethylene and chlorine in a vertical tube reactor wherein cooled ethylene dichloride is showered from the top.

51959. D. N. Dastoor. Improvements in or relating to a device for cleaning cotton in the blow room department. Cleaning cotton from impurities by subjecting them to a plurality of multi-spiked rollers arranged in a sleeve.

51960. Void.

51961. Rotary Hoes Limited. Road making machines. Including vertically guided hammers operated from a power driven cam shaft for tamping loose material passing rearwardly under a strickle.

51962. Void.

51963. N. V. De Bataafsche Petroleum Maatschappij. Oleaginous compositions. Comprising an oleaginous organic material and a compound with molecular weight of at least 1000 and having a linear hydrocarbon chain with polar and non-polar substituent.

51964. The Distillers Company Limited. Method of working materials using carbon dioxide as coolant. Cooling the material while working by means of carbon dioxide.

51965. Void.

51966. Merck & Co., Inc. New antibiotic agents. (July 11, 1953.) Cultivating streptomyces garyphalus in a nutrient medium.

MAY 24.

51967. Void.

51968. Esso Research and Engineering Company. Improvements in or relating to the conversion of hydrocarbon oils and apparatus therefor. By injecting hydrocarbon oil into a coking vessel containing finely divided solid material heated by an external zone and withdrawing vapours formed.

51969. Air Reduction Company Incorporated. Separation of air. The cold recovered in the vaporisation of liquid oxygen product is utilised to produce a reserve of liquid nitrogen.

51970. P. M. Agerwala, R. Kant and D. F. D. Joshi. Improvements in and relating to register translators particularly for multi-exchange telephone systems. Switching means are included in the register translator operated in response to particular values.

51971. The National Rayon Corporation Limited, Dr. M. D. Parekh, J. J. Mehta and V. Y. Divekar. Improvements in or relating to the spinning of viscose filament yarn. Providing a variable speed-system adopted for increasing and decreasing in the same proportion the speeds of the pumps and wheels.

51972. Horizons Titanium Corporation. Electrolytic production of transition metals. Establishing in the bath at

least about 5 per cent by weight of a halide of the metal and maintaining cell voltage below that at which any bath component decomposes.

51973. A. K. Ozai-Durrani. Method of treating rice grains and the grains so treated. The grains are passed through a series of liquid sprays such as water-sprays emitting said liquid in such quantities as to permit progressive increase of moisture content of the grains.

51974. Farmaceutici Italia S. A. Process for converting optically active amino-diols into recemic aminodiols. The active compound is converted into N-acyl derivative, oxidised to remove at least one asymmetric carbon atom forming the corresponding propiophenone which is converted into optically inactive compound containing the original chain.

51975. David Brown Tractors (Engineering) Limited. Improvements in or relating to hydraulic mechanism for tractor-implement combinations. (May 26, 1953.) Hydraulic mechanism raises or lowers implement connected to tractor whereby the downward force on the rear wheel is increased proportionate to the force tending to raise the implement.

51976. Lacrinoid Products Limited and R. Hagen. Improvements in or relating to the manufacture of hollow articles from organic plastic materials. (June 17, 1953.) The mould and the extrusion nozzle are relatively movable in the direction of extrusion, the mould closing when the mould and nozzle are closest.

51977. Laporte Chemicals Limited. A process for the production of alkylated or arylated anthraquin-hydrone or alkylated or arylated anthraquinols and from alkylated or arylated anthraquinols and for the manufacture of hydrogen peroxide. (June 9, 1953.) By reduction by hydrogen in the presence of a metallic palladium deposited on titanium dioxide.

51978. Chubb & Son's Lock and Safe Company Limited. Improvements in and relating to locks. (June 29, 1953.) Providing displaceable supporting means for holding said connecting means out of engagement with the driver.

51979. R. Kaulen. Method and device for the preparing of printing forms, especially of printing cylinders, for

copper plate printing. Seamless coating of printing cylinder with colloid solution introduced into a container receiving the cylinder, rising from the bottom and then kept in constant level, and the cylinder is drawn up longitudinally and is subjected to heat and for flexible assembling form to be mounted on printing cylinder, the former is carried over a suction device adjacent to the contacting place with the cylinder.

51980. Ciba Limited. Manufacture of new halogenpyridazines. Treating with halogenating agent a 6-hydroxy-pyridazine containing in 5 position a free or functionally converted carboxylic group or an acyl residue.

51981. Ciba Limited. Manufacture of new pyridazines. In a pyridazine containing in 5-position a free or functionally converted carboxyl group and in 6-position a substituent convertible into etherified hydroxyl or etherified mercapto group, this substituent is so converted.

51982. Void.

51983. Fairwest (U. K.) Limited. Improvements in or relating to circular looms. [Divided out of No. 49030; antedated to February 20, 1953.] (Addition to No. 49030). Providing a light tensioning device for each warp thread in the form of a hook ring or the like through which the thread passes.

MAY 25.

51984. G. Osame. Improvements in or relating to electro-static-coating machine and the method thereof. A disc is mounted at a front part of a head and is rotated with a leg tube.

51985. Tokyo Shibaura Electric Co. Ltd. Improvements in or relating to a binder particularly suitable for joining a metal with glass, porcelain or the like. Containing a silicon compound of 3 to 6 cyclic condensates of alkyl or phenyl type having hydrogen atoms directly linked to silicon.

51986. Tokyo Shibaura Electric Co. Ltd. Improvements in or relating to a binder particularly suitable for joining a metal with glass, porcelain or the like. Containing a silicon compound of 3 to 6 cyclic polyalkyl or polyphenyl siloxane and a reaction promoting agent.

51987. N. V. De Bataafsche Petroleum Maatschappij. Process for the fractionation of microporous solid particles.

By adding to the mixture a first wetting liquid insufficient to fill all the pores and then placing it in a second liquid of density sufficient to float a portion of particles.

51988. Void.

51989. E. H. Bishop. Twin-slab cavity-wall building blocks and method and apparatus for making them. (June 4, 1953.) Positioning one end of at least one tie element in moulding space of slab moulding pallet; filling mouldable material, inverting pallet after initial setting of material and registering over second pallet to dispose other end of tie element in its moulding space and filling latter with mouldable material.

51990. The General Electric Company Limited. Improvements in or relating to electric pulse generating apparatus. (May 29, 1953.) Generating any selected one of n different pulse trains, the selection being carried out by the application to the apparatus of a single trigger pulse at a time coinciding with the time position of a pulse of the selected train.

51991. E. S. Nossen. A process for the thermal decomposition of a metal nitrate and products made by said process. Metal nitrate is heated to its decomposition temperature in presence of steam.

51992. Imperial Chemical Industries Limited. Improved resinous compositions. (June 1, 1953.) Comprising a polyvinyl acetate-polyvinyl chloride copolymer, an alkyd resin and a poly-socyanate.

51993. Portasilo Limited. Improvements in or relating to structural or reinforcing elements made wholly or principally from wood. (June 1, 1953.) Each layer of wood is bounded by a layer of plywood and all the layers are composed of arcuate components with staggered relationship.

51994. A. F. Sanders. Means for driving a fuel injection pump of an internal combustion engine of the compression ignition type to prevent positive reverse rotation of the engine. Pawl carried by drive shaft, co-operating ratchet on pump shaft having an eccentric cam track and abutment against which the pawl is maintained in contact by centrifugal force assisted by a spring.

51995. Societe Anonyme Pour Les Applications De L'Electricite Et Des Gaz Rares-Etablissement Claude-Paz &

- Silva. Method of manufacturing an electrode for discharge device. Such electrode being of the type comprising an emissive material and a support of conducting material, said support including at least one cavity and the emissive material being in the form of a single piece or a small number of pieces housed in the cavity or cavities.
51996. The Edison Swan Electric Company Limited. Improvements relating to plug-in-type incandescent electric lamps and telephone switchboard comprising them. (June 17, 1953.) Insulated base attached to envelope by contact members secured to the envelope the contact members having extensions to which lamp leads are joined, secured within longitudinal recesses in sides of base member which has longitudinal ribs on both sides of recesses laterally outside the contact members for ensuring that contacts of socket cannot be bridged by contact extensions if the lamp is only partially inserted in the socket.
51997. Oldham & Son Limited. Improvements in or relating to portable electric battery lamps. (May 26, 1953.) Including lens, reflector, bulb holder and bulb assembled to form a hermetically sealed lamp unit filled with non-combustible gas and pressure-sensitive switch operating to cut off electric current to the bulb upon predetermined fall of pressure within the lamp unit.
51998. S. G. Tawde and P. K. Junnarkar. Improvements in or relating to mirrors. Combination of mirrors inclined which is aliquot part of 180° .
51999. J. A. Kavanagh and R. J. Marcy. Improvements in or relating to shoe counters and shoe heel construction. The shoe counter is mounted from solid plastic polymerised polyethylene of such thickness that when released after deformation it returns to its original shape.
52000. J. A. Kavanagh and R. J. Marcy. Improvements relating to method of shoe manufacture. Comprising coating a polyethylene counter with an adhesive placing it in a shoe upper, and after or during lasting adhering said surfaces.
52001. H. J. Elliott and L. G. Ludlow. Improvements in or relating to the separation of sulphur from sulphur ores. The ore is heated with concentrated CaCl_2 solution and the product containing molten sulphur and the gangue is subjected to centrifugal action to separate sulphur.
- MAY 26.
52002. N. D. Barucha. Drum type dumper. Comprising a drum having a longitudinal mouth formed along its length, stub shafts fitted one on each of the two opposite end walls of the drum, the shafts forming axle shafts of wheels supporting the drum.
52003. Council of Scientific and Industrial Research. Improvements in or relating to the preparation of quino-line compounds. 4, 7-dichloro-2-methyl-quinoline is reacted with substituted or unsubstituted p-aminophenol.
52004. Olympia Werke Aktiengesellschaft. A typewriter for oriental languages. (February 24, 1954.) Type bodies provided with main characters are mounted on the type bars displaced to the right while there with vowel signs and accents are mounted on type bars displaced to the left.
52005. Imperial Chemical Industries Limited. Improvements in or relating to titanium base alloys. (June 1, 1953.) Containing 0.5—31 per cent. tin the balance being titanium.
52006. Societe D'Etudes Et De Participations Eau, Gaz, Electricite Energie, S. A. Improvements in freepiston machines including a pneumatic returnenergy accumulator. Discharge aperture of pneumatic accumulator maintained closed during reciprocating movement of piston assembly and opened when such movement ceases.
52007. Ateliers De La Motobecane. Automatic centrifugal variable speed devices, especially for autocycles with a primary belt drive. An expanding pulley with two laterally movable flanges keyed to the output shaft of the motor, with belt tensioning device causing displacement of that shaft.
52008. Ateliers De La Motobecane. Improvements relating to twistgrip devices for autocycles and the like. Conjugate control of throttle and decompressors by two sliders, one of which is displaced by a helical cam surface on a rotary sleeve.
52009. H. Morren. Organic esters of 2-(2-diethylaminoethoxy)-ethanol and their process of preparation. Esterifying 2-(2-diethylamino-ethoxy)-ethanol with a derivative (corresponding to groups shown in figure 1 to 9 of drawings) of appropriate carboxylic acid

52010. United States Steel Corporation. Apparatus for identifying opposite sides of a moving strip having one relatively smooth side and one relatively rough side. In a processing line for applying a different thickness of coating material to opposite sides of a strip having one relatively rough and one relatively smooth side, an apparatus for determining whether proper coatings are being applied to proper surfaces of a strip passing therethrough, is included in the combination.
52011. Smitsvonk N. V. Sparking element for a low tension surface discharge sparking plug. Consisting of two concentric electrodes with a separating body therebetween said body consisting of an insulating material in which electrically conductive particles are inserted along circles parallel to the sparking surface.
52012. Smitsvonk N. V. Distributor for low tension ignition system with condenser discharging. The distributor consisting of stationary contacts positioned along a garland, at the outside of which one or more rotating contacts move.
- MAY 27.
52013. Council of Scientific and Industrial Research. A process of enzymic unhairing and bating of skins and hides. By immersing skins and hides in the water extract of enzymes from germinated ragi.
52014. Council of Scientific and Industrial Research. Preparation of halogenated rubber. By the electrolysis of a halogen acid in the presence of stabilised rubber latex for the liberation of the halogen in situ.
52015. Atkinson's Agricultural Appliances Limited. Improvements in or relating to endless tracks for self-laying track type vehicles. (May 29, 1953.) Series of transversely extending rigid elements with a series of transversely extending pads between them the pads extending beyond the outer surface of the adjacent elements.
52016. Sparkler Mfg. Co. Improvements in or relating to tank cover. Comprising a tank open at one end, a cover plate, a number of bolts pivotally attached to cover plate, said both being adapted to lap over the mouth of the tank and a cam ring adapted to the cover plate.
52017. Sparkler Mfg. Co. Improvements in or relating to pressure filter tank. Including a cylindrical body portion having full open mouth, a stationary closure for the mouth, a filter unit mounting carried by the closure and extending throughout the closure and means for retracting the body from the closure.
52018. The General Electric Company Limited. Improvements in or relating to low pressure electric discharge lamps. (June 5, 1953.) At least one of the support conductors for each electrode having for the greater part of its length within the envelope the form of a strip whose total surface area is considerably greater than that of a similar length of circular section wire of the same cross-sectional area.
52019. L. Rado. Container made of plasticised thermoplastic material. (May 28, 1953.) A quantity of oil is introduced in the container provided for a number of smaller containers, the walls of the large container are pressed together by such force that surplus oil is squeezed out from the container leaving a lining on the inside.
52020. Societe Du vacuum Concrete. Method and arrangement for erecting vertical concrete structures. Panels raised and maintained by means of adjustable struts held to ground by sucker and shuttering removed rapidly after subjecting casting to action of vacuum.
- MAY 28.
52021. L. de Roll S. A. Shaft kiln. Kiln shaft having at least one combustion chamber at its top end which is screened from all sides and is only connected to the shaft through a plurality of hot gas ducts.
52022. Dr. B. Joos. Therapeutic preparation from S-guaiazulene and process for its production. The preparation comprises 1, 4-dimethyl-7-isopropyl azulene and at least one carrying and/or coating material.
52023. Portasil Limited. Improvements in or relating to silos and like storage containers. (June 1, 1953.) Comprising plurality of cylindrical components secured together in coaxial relationship in combination with reinforcing keel extending therealong.
52024. Motoren Werke Mannheim A. G. Improvements in cooling arrangements for internal combustion engines.

Oil cooler connected to cutout over part of length of guide channel for air stream and through which flows secondary air stream branching off from main stream in channel.

52025. Motoren Werke Mannheim A. G. vorm. Benz Abt. Stat. Motorenbau. Improvements for cylinder head for an aircooled internal combustion engine. Valve push rods arranged in bores in intermediate walls joining top and bottom plates; space between walls provided with rows of cooling fins perpendicular to cylinder axis.

52026. Motoren Werke Mannheim A. G. vorm. Benz Abt. Stat. Motorenbau. Improved diesel type of internal combustion engine with fuel injection. Axes of combustion chamber in piston and its inlet opening off-set relatively mutually and relative to piston axis towards injection nozzle, fuel jet arranged to pass through centre of chamber; air enters chamber perpendicular to jet.

MAY 29.

52027. Council of Scientific and Industrial Research. Composition for preparing cylindrical rolls from washed safety base cinematographic films. Composed of an active solvent consisting of dioxane, and a binder.

52028. Council of Scientific and Industrial Research. A cement composition for jointing safety base cinematographic films. Comprising cellulose acetate powder as an active binder, along with a quick drying, non-irritating solvent like acetone.

52029. Imperial Chemical Industries Limited. New dyestuffs. (June 8, 1953.) Treating a chloromethyl or bromomethyl derivative of a tetra-azaporphin by methods known to be capable of replacing the chlorine or bromine atoms.

MAY 31

52030. Void.

52031. Robert Bosch G.M.B.H. Improvements relating to injection pumps for internal combustion engines. Spring loaded valve in pump chamber permitting escape of increasing proportion of fluid into low pressure fuel-line as engine speed increases; a variable restriction influencing pressure in pump chamber and valve lift arranged in path of displaced fuel formed by cut-way portions in valve.

52032. Robert Bosch G.m.b.H. A method and apparatus for the extrusion of rod-shaped of pin-shaped metal articles, particularly sparking plug electrodes. Blank of softer metal placed on blank of harder metal and axial pressure applied to first one to cause metals flow axially; lower blank guided into frusto-conical shape and tapered central portion being left to form rod shaped article.

52033. J. R. Geigy A.-G. Process for the production of heterocyclic monothio-carbonic acid esters. By reacting haloformic acid ester with a heterocyclic mercaptan or a salt thereof.

52034. Zonite Products Corporation. Self-propelling atomizing low pressure liquid compositions, packages thereof and methods of delivery. Consisting of saturated eliphatic monohydric alcohol (upto three carbon atoms) of 75 per cent concentration and 10 per cent to 35 per cent of propellant like fluorinated chlorinated and flourinated saturated eliphatic hydrocarbon (upto two carbon atoms), butane or mixtures thereof.

52035. American Cyanamid Company. Improvements in or relating to clear flame-resistant, self-extinguishing resinous compositions and the production thereof. (February 25, 1954.) Mixture of (1) unsaturated polyester containing 5 to 50 per cent by weight of combined halogen and 0.1 to 5 per cent of combined phosphorus and (2) Compound containing $\text{CH}_2=\text{C}$ group of boiling point at least 60°C .

52036. The Electric Auto-Lite Company. Improvements in or relating to electrical condenser structure. Connector for establishing an electrical connection between electrodes and conductor terminals, consisting of an electro-conductive member having apertures with sharp edges for projection there through of bared marginal portions of one of the electrodes.

52037. National Malleable and Steel Castings Company. Improvements in or relating to a car coupler of the rigid-jawed type. (June 8, 1953.) Means on the head disposed on opposite sides of one of the jaws for inter locking with an opposing coupler and to limit relative vertical movement.

52038. Richard Haworth & Co. (Manufacturing) Limited. Improvements in and relating to woven textile fabrics. (July 27, 1953.) The density of the warp ends being varied gradually from a minimum at the places subject to the

least wear to a maximum at the places subject to the greatest wear.

52039. Richard Haworth & Co. (Manufacturing) Limited. Improvements in and relating to reeds for looms for the weaving of textile fabrics. (July 27, 1953.) The pitch of the reed dents varies progressively between a minimum at the outer ends and a maximum at the centre portion.

52040. S. I. S. Societe d'Investissements Collectifs. Mechanism for repeatedly bending a quantity of fibrous material. There is provided a pair of plates rotating with respect to each other, said plates being slightly spaced apart and each having a plurality of teeth thereon extending into an annular space.

52041. Tokyo Juki Kogyo Kabushiki Kaisha. Improvements in or relating to sewing machine. A device for taking up sewing thread having a number of discs concentrically attached to the main shaft, two thread take-up members being inserted between the adjacent disks.

52042. Void.

JUNE 1.

52043. Electraulic Presses Limited. Improvements in and relating to hydraulic relief valves. (June 6, 1953.) Valve members loaded to resist opening movement by body of liquid forming a liquid spring and which permits movement of valve member being compressed by it, and pressure of which is controlled so that the valve by-passes liquid in on attainment of predetermined pressure.

52044. National Research Development Corporation. New antibiotic and method of preparation thereof. By preparing a culture of *Bacterium antimyceticum* n. sp. in the presence of oxygen and organic and/or inorganic nitrogen and extracting comirin therefrom.

52045. Imperial Chemical Industries Limited. Improvements in or relating to titanium base alloys. (June 8, 1953.) A titanium base alloys consisting of 0.5—22 per cent tin, 0.5—10 per cent aluminium, balance titanium apart from impurities.

52046. Imperial Chemical Industries Limited. Coating compositions. (June 11, 1953.) An aqueous acidic solution containing ferric, oxalate and fluoride ions which is used to form a closely

adherent crystalline coating on titanium metal.

52047. Imperial Chemical Industries Limited. Improvements in or relating to the production of an alkyl nitrate. (July 10, 1953.) Isopropyl nitrate is produced by continuous distillation of a mixture of easily volatile products from a heated liquid reaction mixture formed from nitric acid and isopropyl alcohol and into which separate streams of nitric acid and isopropyl alcohol are introduced the alcohol being introduced as a vapour below the surface of the liquid reaction mixture.

52048. Revertex Limited. Process of vulcanising natural rubber latex or concentrates thereof. (June 12, 1953.) Treating with organic peroxides under high pressure and temperature.

52049. Farbenfabriken Bayer Aktiengesellschaft. Process of preparing ice-colours in textile printing. The process comprises printing on the fibre a paste containing diazo-amino compounds obtained from meta-, or —para-nitranilines substituted by alkyl or alkoxy groups and 2-alkylamino-5(4) sulphobenzoic acids and ice colour components and developing the dye by neutral steaming.

52050. Farbenfabriken Bayer Aktiengesellschaft. Process of preparing diazoamino compounds. Adding an excess of caustic alkali to a solution of diazoamino compounds prepared in alkaline medium and effecting separation by further adding salt and raising the temperature.

52051. Farbenfabriken Bayer Aktiengesellschaft. Process of preparing ice-colours in textile printing. The process comprises printing on the fibre printing pastes containing diazo-amino compounds obtained from weakly-negatively substituted amines of the benzene series and alkylamino sulphobenzoic acids and ice colour coupling components and developing the dye by neutral steaming.

52052. N. V. Philips' Gloeilampenfabrieken. Method of producing substances having insecticidal properties. Reacting phenol having at most three chlorine atoms with dimethyl carbamic acid chloride and using mixed with usual carriers and diluents.

52053. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to process for the manufacture of a substance having insecticide activity.

Carbamic acid derivatives are prepared by reacting a phenol or naphthol with dimethyl carbamic acid.

52054. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of a polyene aldehyde. 4-methyl-6-(2', 6', 6'-trimethyl-1'-cyclohexenyl)-2, 4-hexadien-1-al is made from 2-methyl-4-(2', 6', 6'-trimethyl-1'-cyclohexenyl)-2-butene.

52055. J. L. R. Cailoll. Thermostatic arrangement for automatic adjustment of output and temperature in solar boilers. Thermostatic arrangement is provided in a casing having an axial rod guided by an oily liquid.

52056. Prokash Chandra Gangoly. Improvements in or relating to structural members. One flange of angle section has one row of vertical slots while other has two rows of inclined slots so arranged as to be oppositely inclined to each other in two opposing rows

JUNE 2.

52057. Inventa A. G. fur Forschung and Patentverwertung. Improvements in or relating to the crimping of synthetic fibres by fixing method. Subjecting the tow or cable with a moisture content of at least 5 per cent into a crimping machine at a speed of at least 100 m/min.

52058. Commonwealth Engineering Co. Limited. Improvements in vehicle bodies. (July 5, 1953.) A construction unit comprising a frame having vertical and horizontal members, two or more such unit being adapted to be connected end-to-end to form the vehicle body.

52059. Societe Anonyme Des Pneumatiques Dunlop and N. Nebout. Improvements in machines for extracting vulcanisation bags from pneumatic tyres. (September 3, 1953.) Machine with means for moving gripping means with two jaws along a path part of which lies substantially in the equatorial plane of the bag.

52060. M. S. Wadke. Improvement in and relating to improved type of adjustable metal wrist bands. Rectangular slitted dumbbell shaped pieces linked with two hinges each enclosing one arm of different piece.

JUNE 4.

52061. Void.

52062. Void.

52063. R. Natonek. A baby's rattled rubber soother. Hollow wall of ring and circular recess, in stop member connecting ring to rubber teat, containing pellets.

52064. K. Abildgaard-Elling. Method for producing adrenal cortical hormones. (June 5, 1953.) Void after publication. Growing *Penicillium expansum* under aerobic conditions in a fermentation medium, and adding a steroid compound having a methylene group in the 11-position.

52065. K. Abildgaard=Elling. Method for producing adrenal cortical hormones. (June 5, 1953.) Void after publication. Growing *Dactylium dendrodes* under aerobic condition adding a steroid compound having a methylene group in the 11-position.

52066. Ciba Limited. Manufacture of new 21-unsubstituted halogen-pregnanes Treating 9:11-unsaturated 3:20-dioxygenated pregnene compounds with an agent capable of introducing hypalons acid by the additive combination at the 9:11-double bond.

52067. Ciba Limited. Manufacture of new halogenpregnenes. 9:11-unsaturated 3:18:20-trioxygenated pregnene compound is treated with an agent capable of introducing hypochalous acid by additive combination at the 9:11-double bond.

52068. Ciba Limited. Manufacture of hydrophenanthryl-carboxylic acids. A saturated or unsaturated steroid lactam is treated with a basic agent.

JUNE 5.

52069. Felco Hoists Limited. Improvements in loading apparatus for use on vehicles. Frame articulated to the vehicle has support incorporating inner and outer sections and drive means to raise or lower the frame, which in lower position touches the ground and on being raised angle between its outer section and frame is reduced.

JUNE 7.

52070. N. D. Bharucha. Manual scoop. Comprises bar mounted at intermediate place on pivotally mounted guide and having scoop on one end and handle on the other.

52071. Dr. R. S. Dubey, S. S. Mavi, H. Singh and Dr. D. N. Daruvalla. An improved process for the purification of raw juice of sugarcane (or Leet) or

molasses. Raw sugar-cane juice treated with SO_2 and lime and further with CO and lime.

52072. Void.

52073. Siemens & Halske Aktiengesellschaft. Improvements in or relating to circuit arrangements for teleprinter switching installations with selection by teleprinter impulse combinations. (April 27, 1954.) In which, additional selectors convert dialling signals into signals for their control, both directions of transmission part art employed, the motor of the teletypewriter of calling subscriber is started for permitting dialling and the dependence of motor starting upon motor switching is not established until called station is reached.

52074. Void.

52075. W. H. Miner, Inc. Friction shock absorbing mechanisms. Pressure applying means projecting from casing within which is resilient column of rubber cushioning units in series each until including a rubber pad and a plate slidably fitting inside casing for lengthwise movement.

52076. Hackbridge Cable Company Limited. Electric power cables. (July 16, 1953.) Wherein the cores are screened by a substance having a high electrical conductivity intimately dispersed within a carrier.

52077. Electraulic Presses Limited. Means for varying the delivery of pressure liquid supplied to the cylinder of a hydraulic press. (June 12, 1953.) Means actuated by valve member of relief valve to move valve member of selector valve in opposite direction to unload or load pumps upon decrease or increase of pressure within press cylinder.

52078. R. C. Bremer. Method of drying wood by the use of high-frequency and hot air. Passing wood along a conveyor belt through a heat insulated tunnel and subjecting it to a stream of hot air and high frequency energy.

52079. Chas. Pfizer & Co., Inc. 2-Substituted imidazolines and their preparation. Containing carboxylic acid with ethylenediamine.

52080. Imperial Chemical Industries Limited. Improvements in or relating to the melting of high melting metals or alloys. (June 12, 1953.) Comprising an arrangement of feed rolls and contact system consisting of a plurality

of individually spring-loaded contact brushes arranged in one or more groups.

52081. Imperial Chemical Industries Limited. Improvements in or relating to the melting of high melting point metals or alloys. (June 19, 1953.) Arc is struck between an electrode and surface of the charge to be melted and position of the arc is adjusted by electro magnets.

52082. S. Steuerman. Method of and means for compacting soil. Forming a cavity in the soil, adding to this cavity granular material of grains different in size. Subjecting the soil and grains to vibrations while introducing a liquid to flow inside the soil and continuing the treatment until the soil and grains are thoroughly compacted.

52083. Chiksan Company. Automatic hydraulic giant. Motor means for swinging nozzle vertically and horizontally and automatic means controlling motor means so as to move the nozzle either vertically or horizontally or both horizontally and vertically simultaneously.

52084. Void.

52085. Co-operative Verkoop-En Productievereniging Van aardappelmeel En Derivaten "Avebe" G. A. Process for fractionating starch. [Addition to No. 48630.] Starch solution from which starch is fractionated is prepared from a raw material containing other substances besides starch.

JUNE 8.

52086. Norsk Hydro-Elektrisk Kvaestofaktieselskab Filter cell. Having a drum with a wire coil on it and a filter cloth stretched over the wire coil.

52087. J. N. Marshall & Company and K. M. Doshi. Automatic setting device for electrically-operated meters or the like requiring adjustment on a minimum or maximum mark. Comprises a trigger circuit responsive to voltage across the meter arranged to fire when the needle moves below the minimum or above the maximum.

52088. N. V. De Bataafsche Petroleum Maatschappij. Preparations for treating plants. [Divided out of No. 48790: ante-dated to January 14, 1953.] Comprising S-alkylisothiourea derivatives in admixture with solvents and/or liquid or solid carriers or diluents.

52089. New Castle Products, Inc. A folding door and a lazy tongs structure therefor. Articulated lazy tongs with a plurality of pairs of crossing plates providing with vertical pintles.

52090. Laporte Chemicals Limited. Improvements in or relating to catalytic reduction of anthraquinone derivatives and to the manufacture of hydrogen peroxide. (June 9, 1953.) Alkylated or arylated anthraquinone in solution is reduced by hydrogen in the presence of palladium catalyst comprising metallic palladium deposited on MgO , partially hydrated MgO or $Mg(OH)_2$ to quinhydrones and quinols used for the production of H_2O_2 .

52091. Void.

52092. The Vitarama Corporation. Closed link electronic camera. Comprising lens mount, picture tube, photographic recorder including receiver tube, common synchronization generator for picture tube and the recorder, film feeding mechanism and means coordinating the signal output of the picture tube with the film movement.

52093. The Vitarama Corporation. Improvements in apparatus for applying synchronization marks on picture and sound films. Including separate marking stations for respective film strips, a group of electrodes at each station means that supply electric current to electrodes at potential enough to discharge sparks through films and control means operated according to film movement and controlling current supply means and thereby application of synchronisation marks to the films when pre-selected portions thereof reach the marking stations.

52094. Ciba Limited. Manufacture of new halogentestanes. A 9 : 11-unsaturated 3 : 17-dioxygenated testane compound is treated with an agent which is capable of introducing by additive combination at the 9:11-double bond a hypohalous acid.

JUNE 9.

52095. British Sugar Corporation Limited. Improvements in package wrapping machines. (June 9, 1953.) Means are provided for automatic raising front and rear walls of wrapper and also means are provided for folding, tucking and sealings.

52096. British Insulated Callender's Cables Limited. Improvements in

insulated electric wires and cables. (June 22, 1953.) Wherein the inner surface of the outer layer is formed with shallow thin ribs projecting inwards.

52097. The M-O Valve Company Limited. Improvements in or relating to magnetrons. (June 17, 1953.) The anode is provided at each end face with two concentric coupling rings the four coupling rings is broken at one place the couplings at that ends are disposed on radii.

52098. Standard Telephones and Cables Limited. Improvements in or relating to electrical storage of intelligence. (June 10, 1953.) Comprises plurality of stores, intelligence receivers, transmitters, distributors and detectors.

52099. Standard Telephones and Cables Limited. Improvements in or relating to relaxation oscillators and electronic counters. (June 10, 1953.) Crystal triode amplifier with a base electrodes emitter and collector, the base being grounded.

52100. Standard Telephones and Cables Limited. Improvements in or relating to electric semiconducting devices. (July 22, 1953.) Gold is diffused into semiconductor as the acceptor impurity.

52101. Mavor & Coulson Limited. Improvements relating to rollers for conveyor belts. Consisting of annular components held co-axially end-to-end on a rigid hub adapted to accommodate bearings for a supporting axle.

JUNE 10.

52102. Void.

52103. G. S. Braria. Electric bulbs and sockets therefor. Having four contact points on bulb cap, two diagonally opposite ones connected to ends of a filament each, and a holder with four cuttings on its rim, two diagonally opposite ones engaging two pins one the bulb cap at a time, to allow the touching pins of the holder to contact diagonally opposite contact points on the cap of the bulb, at a time.

52104. Telephone Manufacturing Company Limited. Improvements in automatic telephone exchange systems. (June 15, 1953.) Comprises a plurality of primary outgoing and incoming tubes divided in groups and plurality of connecting devices.

52105. Stitching Waterbouwkundig Laboratorium. Device for taking small amounts of soil from watercontaining

soil. A tubular body is driven in soil and means are provided for supplying compressed air.

52106. Fulmer Research Institute Limited. Improvements in and relating to steels. (June 17, 1953.) Steel containing 0.05 per cent. C. 1.5 per cent. to 5 per cent. Si, and 0.1 per cent. to 5 per cent. Aluminium.

JUNE 11.

52107. Void.
52108. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De Saint-Gobain Chauny and Cirey. Improvements in or relating to manufacturing plaster or similar boards by continuous rolling or pressing. (May 3, 1954.) Paste is continuously supplied with a flat porous flexible support which during subsequent shaping becomes partially or wholly united with it.

52109. Simon-Carves Limited. Improvements relating to level indicators. Comprising a fluid-filled chamber for mounting in an opening in the wall of a bunker with one face in flush with inner surface of the bunker wall, the face is formed of a yielding diaphragm, a conduit leading from the chamber to a pressure-actuated electric switch for controlling an indicator.

52110. Mavor & Coulson Limited. Improvements in loading machines. Applying to displaceable conveyor chain pulley a lever and spring assembly comprising level fulcrumed to frame and oppositely acting spring between pulley and lever and frame and lever, one having greater purchase than other.

52111. Council of Scientific and Industrial Research. Enamels for wire wound resistors. [Divided out of No. 49425; ante-dated April 22, 1953.] Composed of 30-35% PbO, 10-12% Al₂O₃, 12-15% B₂O₃, 18-20% SiO₂, colourants 0-3% alkalies, 18-22% and Fluorine 1-2%.

52112. Council of Scientific and Industrial Research. Improvements in or relating to cast synthetic resins. Condensing esters or ethers of phenols with chloro methyl ether or dichloro methyl ether.

JUNE 12.

52113. Dipl. Ing. A. Kreidler. Improvements in or relating to motorcycles.

Tread cranks disconnectable to be used as a kick starter or for application of brakes through carrier.

52114. British Insulated Callender's Cables Limited. Improvements in or relating to electric cables and their manufacture. (June 26, 1953.) Void after publication. Wherein the core is enclosed in a hard metal sheath of which the wall is at a multiplicity of mutually spaced small areas displaced inwardly to form dimples having maximum peripheral dimensions $\frac{\pi D}{6}$.

JUNE 14.

52115. Void.
52116. T. Yoshioka. Improved separating and classifying apparatus for the rotating hammer-type crusher. Wherein below the rotating hammer several pairs of rollers rotating in directions opposite to each other are provided.

52117. Nani Chakraverty. A drop-bottom type coke oven. A drop bottom coke-oven having a removable drop-bottom, ancillary members, an internal chimney, a hollow fabricated oven wall structure, the charging and discharging operations being made by gravity.

52118. Automatic Telephone & Electric Company Limited. Improvements in automatic telephone systems. (January 26, 1952.) [Divided out of No. 48805; ante-dated to January 19, 1953.] Electronic control equipment is provided for group selecting stage and serves to control the completion of connection to wanted line.

52119. Union Carbide and Carbon Corporation. Thermochemical metal scarfing. (March 31, 1954.) Preheating flames are produced by directing jets or fuel gas at an acute angle on the oxidising gas.

52120. The Chairman, Indian Tea Association. Tunnel for withering tea leaf. Comprises a section for admission of conditioned air and another section for the exhaust of air admitted, said two sections being separated by an intermediate air-flow space which is adapted to be closed during the withering operation so as to form a continuous passage substantially closed to the atmosphere.

52121. Imperial Chemical Industries Limited. Metallisable azo dyestuffs. (June 17, 1953.) Diazotising an o-aminophenol sulphuric acid ester and

coupling the diazo compound with a coupling component.

52122. Imperial Chemical Industries Limited. Improvements in or relating to non-caking and free-flowing ammonium chloride. (July 3, 1953.) Containing ammonium chloride and a watersoluble salt of a long chain alkylamine or of the sodium salt of a long chain alkyl aryl sulphonic acid.

52123. Dunlop Rubber Company Limited. Improvements in brakes. (July 21, 1953.) A spring urges a sleeve from one stop to another moving the friction member a predetermined distance from the braking member after each application of brake.

52124. Huntington, Heberlein & Company Limited. Improvements relating to the separation of solid materials of different specific gravities. Material subject to initial sink and float separating treatment and the sink product is further subjected to sink and float separating treatment.

52125. Torrance & Sons Limited. Improvements in and relating to mixing and agitating machines. (June 15, 1953.) Wherein the drive imparts to the stirrer a combined bodily sweeping movement and axial rotational movement which will differentially vary automatically according to the loads encountered in making said movements.

52126. L. R. F. Harris. Improvements in or relating to control apparatus for communication systems. (June 15, 1953.) Each trunk is allotted a characteristic time in a recurring time cycle and information is received by the apparatus.

52127. Ciba Limited. Process for the manufacture of new esters. Alkylaminobenzoic acids containing 4-7 carbon atoms in the alkyl group are reacted with polyglycols. $\text{HO}-(\text{CH}_2-\text{CH}_2-\text{O})_n-\text{R}'$, R' being a hydrogen atom or a lower alkyl residue and n standing for a number from 8 to 12.

52128. Ciba Limited. Process for the manufacture of new esters. β -Butylaminobenzoic acid is reacted with none-ethylene glycol monomethyl ether.

52129. Ciba Limited. Process for the manufacture of mercurated hydroxy-alkyl biuret derivatives and preparations containing the said derivatives. Allyl biuret compound is reacted with mercury salt in presence of water or alcohol.

52130. Void.

JUNE 15.

52131. Cable Covers Limited. Improvements in and relating to wire rope grips and like fastening devices. The device comprises associated clamp plates provided with independent spaced pairs of jaws of soft metal adapted to grip the rope end or ends and to set up a bulge in the section of the rope between the jaws.

52132. The General Electric Company Limited. Improvements in or relating to alloys. (June 19, 1953.) Comprising major constituents like tungsten and/or molybdenum and a minor constituent consisting of two or more of the metals iron, nickel, cobalt, chromium, the proportion of major constituent being less than 75 per cent. and proportion of chromium, if present, being not greater than 15 per cent by weight of the alloy.

52133. The General Electric Company Limited. Improvements in or relating to electric amplifier arrangements. (June 23, 1953.) Comprising a pair of amplifiers, means to supply signal to be amplified, a hybrid device for combining the output from the two amplifiers.

52134. Metropolitan - Vickers Electrical Company Limited. Improvements in electric lamps. (July 3, 1953.) The supporting wires for the filament carry between them a bead having semi conducting properties.

52135. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De St. Gobain, Chauny & Cirey. Improvements in or relating to electric resistance heaters. Wherein the heating element is in the form of a row of laterally spaced closed loops connected to one another in series near their centres to divide each loop into two sections.

52136. F. Hoffman-La Roche & Co. Aktiengesellschaft. Process for the manufacture of a polyene aldehyde. Reacting 4-methyl-6-(2, 6, 6-trimethyl-1-cyclohexenyl)-2, 4-hexadien-1-al with a tri (lower alkyl) ester of a lower orthoalkanoic acid, reacting the product with propenyl alkyl ether and hydrolyzing the product formed in aqueous acid medium.

JUNE 16.

52137. J. D. Robertson. Improvements in adjustable-curvature expander rolls and the like. Comprising a roll body

having a flexible surface sleeve resiliently engaged over a series of roll sections, an axle on which the roll sections and surface sleeve are rotatable in unison, the axle is resiliently flexible throughout one or more portions of the length of roll.

52138. The British Thomson-Houston Company Limited. Improvements in and relating to polyphase dynamo-electric machines for driving cranes. (July 8, 1953.) Comprising a stator having a winding to provide alternative members of poles, and a rotor having two separate windings, one provided with slip rings and suitable for acting with one set of poles to produce low speed and the other a high resistance short-circuited winding and suitable for acting with alternative set of poles to produce a high speed.

52139. S. A. Earnshaw. Machine for applying material to walls and other objects such as applying plaster to walls, applying paint to a surface and the like. Feed worms within a hopper moves the material on to a belt, the belt centrifugally throwing the material.

52140. J. & P. Coats Limited. Moulded plastic spools. Comprising an inner tube and an outer tubular body, the outer body having at the ends of the spool circumferential outwardly extending rims and means for attachment of end labels to the spool.

52141. J. & P. Coats Limited. Core assemblage for producing spool bodies of plastic material. Employing pairs of interfitting core members for the formation of hollow spool bodies defined by inner and outer tubes integrally joined at ends of the spool body in end wall portions.

52142. V. R. Sonti. Improvements in or relating to wood preservative compositions. Consists of the elements, chromium, copper and arsenic wherein the chromium component is provided in the form of sodium dichromate.

52143. Radio Corporation of America. Color television recording and reproducing. Simultaneously impressing upon, or playing back from, parallel tracks of magnetic tape respectively different component signals which together constitute a complete colour television signal.

52144. Farvmann Diesel, Farny & Weidmann. Improvements in or relating to

internal combustion engines. Steam from cooling water jacket introduced into inner region of hollow space in housing acting as condenser flung to outer periphery on rotation of housing by engine; stationary scoop projecting upto the outer periphery leads condensate back to cooling jacket.

52145. The General Electric Company Limited. Improvements in or relating to magnetic recording media. (June 26, 1953.) Comprising a thin flexible sheet carrying a layer of metallic iron crystallites of less than 0.1 micron dimensions.

52146. Imperial Chemical Industries Limited. Improved sodium nitrate products and a method for their production. (August 19, 1953.) Crystallising an aqueous solution of sodium nitrate containing a salt of compound of formaldehyde and naphthalene mono sulphonic acid.

52147. The Goodyear Tire & Rubber Company. Improvements in tank fitting. Including pair of parallel rigid fuel impervious ring members fixed by attached to inner periphery of rubberised fabric flange attached to tank wall and fuel resistant plastic material between two rings.

52148. Void.

JUNE 17.

52149. Wingfoot Corporation. Improvements in tires. Consisting of one rubbery material and polychloroprene.

52150. The Osaka Aluminium Works Ltd. Improvements in silver cans. The drum is made by rolling up an aluminium alloy plate in cylindrical form after which a ring and a bottom are fitted into the upper and lower ends.

52151. United States Steel Corporation. Apparatus for conveying magnetizable sheets. Conveyors spaced apart in tandem, a rotatable magnetizable roll between the conveyors below the path of travel of the sheets, a second rotatable magnetizable roll between the conveyors above the said path of travel.

52152. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to oxygen cutting machines. (June 30, 1953.) Of the type in which the torch assembly is supported at a constant distance from the surface of the plate being cut by a plate riding

roller, the movement of which conforms to the irregularities of the plate surface, the plate riding roller being provided with one or more internal conduits for the passage of coolants.

52153. General Railway Signal Company. Improvements relating to code communication systems for centralised traffic control of railways. Including a central control office and a plurality of field stations, each field station having a releasable self-propelled time interval device, a bank of stepping relays and transmitting means.

52154. Standard Telephones and Cables Limited. Improvements in or relating to electric systems for storage and retransmission of intelligence. Capable of storing incoming messages and retransmitting stored messages in accordance with destination information carried each message and in which each received message is directed into a store in which it remains until it is transmitted over an outgoing channel.

JUNE 18.

52155. Dunlop Rubber Company Limited. Improvements in or relating to pneumatic tyres. (April 4, 1952.) [Divided out of No. 48378; ante-dated November 6, 1952.] Comprising a pair of bead rings connected by a web in the form of a film made from a thermoplastic material.

52156. Glaxo Laboratories Limited. Improvements in or relating to penicillin preparations. (June 24, 1953.) Therapeutic composition comprises N-benzyl- β -phenyl ethylamine salt of penicillin G and a pharmaceutical carrier.

52157. M. G. DePenning (legal representative of V. E. DePenning deceased.) Yarn and method of manufacturing the same and apparatus for use in connection with such manufacture. Straight staple length fibres disposed in substantially parallel and overlapping relation and bonded by adhesive material.

52158. Standard Telephones and Cables Limited. Improvements in or relating to intelligence storage equipment. (June 19, 1953.) Provided with a number of storage sections of equal capacity and recording and reading means.

52159. H. G. Houghton and Engineering & Lighting Equipment Company Limited. Improvements in or relating to junction boxes for electrical wiring

systems. (June 19, 1953.) Consists of upper and lower casings and the body is pivotally connected to the lower casing part for movement about an axis in alignment with a parallel to the general direction.

52160. Tubewrights Limited. Improvements in or relating to metal tubes and a method of forming the ends thereof. (June 19, 1953.) The tube end is formed with an endwall to seal the end in a fluid tight manner, a pair of opposed apertures are formed in the tube walls, a tubular bush is inserted between the apertures and the joints between the bush and the apertures are sealed.

52161. Smith Stanistreet & Co., Ltd., Preparation of new hydnocarpic acid derivatives. By the condensation of ethyl hydnocarpate with hydrazine hydrate.

52162. The plastic and Industrial Corporation Limited. Improvements in or relating to brushes. Wherein the bristle pad is a one piece pad made of polyethylene or like semi-rigid material.

JUNE 19.

52163. Rheinpruessen Aktiengesellschaft fuer Bergbau und Chemie. Reaction apparatus for carrying out the hydrogenation of carbon monoxide. (May 11, 1954.) Comprising tall cylindrical vessel provided with cooling system, a series of vertical shafts, a common space below the lower edges of the shafts to form sump, a common gas space, the distance between lower edge of shafts and gas inlet being a least as great as diameter of cylindrical part of reaction space.

52164. L. Ringdal. Cartridge. The cartridge case consists of flexible elastic material and the case and base are seemed mainly with the aid of elasticity of the material.

52165. Norsk Hydro-Elektrisk Kvælstofaktieselskab. Process for the production of calcium nitrate, pure monoammonium phosphate and nitrogen-phosphorus-containing fertilizer from raw phosphate. Comprising of dissolving raw phosphate in nitric acid dividing the solution into parts A and B cooling part A to crystallise out calcium nitrate tetrahydrate, in next step the remaining solution is neutralised with ammonia gas to give monoammonium phosphate and other precipitates, and in next

step solution B is converted to nitrogen-phosphorous fertilizer by neutralization, and evaporation and addition of precipitates from previous step.

52166. Void.

JUNE 21.

52167. Coucil of Scientific and Industrial Research. Treatment of tamarind pulp for the extraction of tartaric acid and other useful components. Extracting with alcohol to get tartaric acid and sugars in extract and KHSO_4 and pectin in residue.

52168. Void.

52169. "Shell" Research Limited. Improvements in and relating to fuel oils and an improved method of producing hot gases. (June 22, 1953.) Comprises fuel oil with high ash content on combustion and a magnesium silicate as additive.

52170. Universal Oil Products Company. Method of stabilizing rubber and product thereof. Comprising incorporating N-N'-dialkyl-p-phenylene diamine in which each of the alkyl groups contains at least 7 carbon atoms.

52171. Alexander Smith Incorporated. Filament crimping apparatus. A crimping chamber, a pair of rolls for feeding the filament material to be crimped into the chamber, and a closure member for the chamber which member can be adjusted with variations in the quantity of crimped material in the chamber.

52172. Manheim Manufacturing and Belting Company. Improvements in or relating to drive belts. Comprising plurality of links in superimposed overlapping relation and stud element having intermediate portion extending longitudinally of the belt and opposite end portions extending through and beyond the outermost links.

52173. Dunlop Rubber Company Limited. Resilient materials suitable for use in upholstery. Comprising a solid foam made up of a foam rubber constituent and a resilient polyurethane foam constituent.

52174. Societe CIVILE d'ETUDES pour MATERIEL de FONDERIE. Pneumatic or hydraulic controlling device particularly applicable to the stripping of mould cores comprising a plurality of parts. (October 21, 1953.) First piston movable in cylinder and second piston movable relative to cylinder connected

to two elements to be controlled, passage opening between the pistons and a stop on first piston so disposed to meet a stop on second piston and carry it along after a certain displacement of first piston.

52175. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a method of applying light-diffusing layers to glass surfaces and glass objects obtained by carrying out this method. By burning magnesium or alloys and disposition on glass surface.

52176. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of a polyene aldehyde. Reacting β - C_{14} -aldehyde with trialkyl ester of lower ortho-alkanoic acid to produce β - C_1 -acetal, reacting the latter with vinyl lower alkyl ether and then with propenyl lower alkyl ether to produce β - C_{14} -diether-acetal which is hydrolysed.

52177. J. Deckers. Impervious packing for bandages and suchlike. The packing comprises a rectangular cover folded in the middle and means forming at least one pocket, the pocket being attached to the cover by one of the edges of the pocket along the fold of the cover and the edges of the pocket being sealed to furnish a notebook type of packing.

52178. Harris Research Laboratories Inc. Improvements in or relating to the bleaching of keratinous fibrous materials. (June 22, 1953.) By treating the fibrous material with an aqueous solution containing free formaldehyde and a ferrous salt, followed by bleaching with hydrogen peroxide.

52179. The Birmingham Small Arms Company Limited. Improvements in or relating to power transmission devices for pedal cycles. (June 24, 1953.) Crankcase of engine provided with cover members of circular form enclosing hub, gearing and clutch and extend within a brake drum constituting part of the wheel.

52180. General Railway Signal Company. Improvements relating to centralised traffic control systems for railroads. The control office is provided with an electronic circuit arranged to respond to changes in line current that occur on application and removal of a line shunt by a field station and effective to magnify such changes for facilitating the response thereto of a code-following relay at the control station.

JUNE 22.

52181. Void.

52182. Automatic Telephone & Electric Company Limited. Improvements in telecommunication systems. (December 14, 1951.) [Divided out of No. 48509; ante-dated to November 28, 1953.] Comprises a plurality of gas discharge tubes current flow taking over transfer path.

52183. Automatic Telephone & Electric Company Limited. Improvements in telecommunication systems. (December 14, 1951.) [Divided out of No. 48509 ante-dated Nov. 28, 1952.] Circuit arrangements for striking the discharge tubes in which the cathode resistor is in the priming circuit.

52184. Imperial Chemical Industries Limited. Improvements in or relating to the melting of high melting point metals or alloys. (July 1, 1953.) Using a consumable electrode comprising a metal or alloy tube containing the metal or alloy to be melted in the form of powder, sponge.

52185. Simmonds and Stokes (Niphan) Limited. Improvements relating to electric plug and socket cable couplings. (July 8, 1953.) An insulator block is retained within its casing by lateral projection.

52186. The English Electric Company Limited. Improvements in and relating to electro-dynamometers. (July 9, 1953.) Having two coils forming a unit turning in magnetic field, field axes of the coils and axis about which the unit turns all mutually inclined, the coils each forming part of a distinct electronic circuit energizing the corresponding coil in linear response to a corresponding input signal, there being two such input signals.

52187. A Picciati. A device for mechanically extracting fibres from the stems of textile plants. One pair of counter-rotating cylinders, and a series of groups of working members comprising at least one pair of grooved cylinders and two pairs of other rollers.

52188. Executors of James Mills Limited. Improvements in lubricators for greasing the rails of railways and the wheels which ride on them. Stationary lubricator mounted in rail supporting bed embodying lubricant container, feed pump means supplying lubricant from pump to the rails and pump operating element mounted on one running rail adapted to be displaced vertically under

the deflections of the rail consequent in passing traffic and reciprocate pump actuating element.

52189. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of a polyene aldehyde. Preparing 2, 6-dimethyl-8-(2, 6, 6-trimethyl-1-cyclo-hexenyl)-2, 4, 6-octatrien 1-al starting from 2-methyl-4-(2, 6, 6-trimethyl - 1-cyclohexenyl) - 2-buten-1-al.

52190. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Preparation of novel 2-imidazolone derivatives. Heating in an acid medium 1-(α -substituted-benzyl)-3-(formyl methyl) urea di (lower alkyl) acetal.

52191. Ciba Limited. Process for the manufacture of sulphonamides. Reacting aromatic sulfonic acid halides with amines in presence W. W'-bis-dialylaminoalkanes.

JUNE 23.

52192. Ruston-Bucyrus, Limited. Improvements in or relating to a cable tool drill. Fluid pressure actuated means connected to spudding means, power actuated cable-unspooling means connected to a cable winch and means responsive to high back-pressure in fluid pressure actuated means to raise the drill bit to admit power to the power actuated cable-unspooling means.

52193. Imperial Chemical Industries Limited. New disazo dyestuffs. (June 24, 1953.) Treating a disazo compound with an agent yielding copper.

52194. Imperial Chemical Industries Limited. Melt-spinning apparatus. (July 3, 1953.) Comprising a feed passage for solid polymers leading to a melting unit made up of a number of hollow heater members e.g., hollow cones.

52195. The Goodyear Tire & Rubber Company. The bead spacer. Comprising a continuous inextensible band of stiff material of an outer radial dimension larger than the inner radial dimension of the beads.

52196. G. A. Ferrand. A method of tensioning reinforcement members of cylindrical bodies. Fitting hoops or endless slings on body, fixing them at one or more points, longitudinally displacement at one or more points parallel to axis of body and fixed to body at displaced points.

52197. Ions Exchange & Chemical Corporation. Producing organic metal salts and the salts so produced. Reacting an organic starting material having at least one OH group with a solution of a metal salt in the presence of a catalyst.

52198. A. Kreidler Dipl. Ing. Kick starter device. Kick starter shaft of the device cooperates with the same intermediate gear wheel provided in the gear mechanism for the engagement of the pedal crank drive.

52199. A Kreidler. Construction of a single-track vehicle. Bearing constructed to take built in pedal crank drive, or a foot rest axle according to choice.

52200. A. Kreidler, Dipl. Ing. A gear for single-track vehicles. Gear box provided with bearings to admit either a pedalcrank shaft or a foot rest with or without a kick starter device.

52201. L. M. Keeler and P. M. Strang. Method of assembling fibrous elements. Establishing a stream of liquid in an elongate conduit having an imperforate wall, the stream having a predetermined velocity of flow and introducing the fibre to be assembled into said conduit whereby the fibres are caused to migrate towards the axis of the stream in a parallel manner.

JUNE 24.

52202. Void.

52203. American Cyanamid Company. Improvements relating to the production of riboflavin. (April 23, 1954.) The process comprises growing the fungus *Ashbya gossypii* under submerged aerated conditions in an aqueous nutrient medium substantially free of carbohydrates and containing metabolisable proteinaceous material and lipid material.

52204. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to gas-fractionating systems. Gas fractionating column is cooled at its upper side by means of a gass refrigerator.

52205. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a method of applying light diffusing layers to glass surfaces and glass objects obtained by carrying out this method. Glass surface is subjected to gaseous oxidation products of phosphorus while depositing magnesium oxide.

52206. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to

binocular optical systems for fluorescent image intensifiers. The viewing screen is arranged in the focal plane of objective and the parallel rays from objectives are deflected through 90°.

JUNE 25.

52207. Void.

52208. Void.

52209. Void.

52210. Internationella Siporex Aktiebolaget. Method for steam-curing macroporous bodies containing water. Bodies are steam in an autoclave where the pressure is below 0.9 kg/cm².

52211. Seetru Limited. Improvements in and relating to railway rail fixings. (June 26, 1953.) Resilient pad of rubber between rail or base plate and sleeper, anchor bolt in hole in sleeper passes through resilient sleeve so as to insulate the sleeper and other parts of rail mounting.

52212. Behringwerke Aktiengesellschaft. Process of preparing stable highly purified gamma globulin preparations. (July 31, 1953.) Wherein beta globulin is precipitated at ionic strength of 0.07 ± 0.02 at pH 5.3 ± 0.05 at protein concentration of 3—5 percent, alpha globulin is precipitated at ionic strength below 0.001 at pH 5.0 ± 0.05 at protein concentration 2 ± 0.05 and their residual quantities as insoluble aluminium compounds.

JUNE 26.

52213. Telephone Manufacturing Company Limited. Improvements in modulating arrangements for multiplex carrier wave telephone systems. (June 30, 1953.) Pilot frequencies associated with the input and output bands of a group modulator are employed in a regenerative modulation system to provide carrier source for the group modulator.

52214. Dormon & Smith Limited. Improvements in and relating to electric circuit breakers. (July 10, 1953.) Including an armature or part thereof which projects over the overload coil and core pivoted between frame sides so that it can be detached therefrom or assembled there between by a pull or push action and not involving manipulation of screws or pins.

52215. Dorman & Smith Limited. Improvements relating to electric circuit

breakers. (July 10, 1953.) Comprising housing in which are mounted a fixed contact, a movable contact and an operating mechanism for moving the latter towards or away from the former, the movable contact at its end remote from the fixed contact urged to engage a stop to pivot about it initially and after engaging the fixed contact, is moved away from the stop, whereby a rolling wiping engagement of the two contacts is obtained.

52216. Armstrong Cork Company. Improvements in or relating to textile fiber drafting element containing a surface-active material and method of making the same. Having a working surface made of compatible mixture of a vulcanized rubber-like butadiene-acrylonitrile copolymer and a compatible surfactant.

JUNE 28.

52217. Void.

52218. Void.

52219. Void.

52220. The General Electric Company Limited. Improvements in or relating to telephone subscribers apparatus. (July 1, 1953.) Comprises, two terminals, a microphone, a transistor amplifier and means for deriving electric supply.

52221. J. R. Giegy A.-G. Process for the production of new aliphatic esters of phosphoric acid and pest control agents made from such esters. Reacting trimethylphite with trichloroacetic acid ester.

52222. Chas. Pfizer & Co., Inc. Improvements in or relating to antibiotics and the production thereof. (April 21, 1954) Void after publication. Cultivating a strain of streptomyces S. 942 under submerged conditions to produce oxytetracycline.

52223. Void.

52224. Jotindra Nath Dutt. Improved token instrument for controlling railway traffic. Electromagnetically actuating elements engaging peripheral notches of locking discs on handle rotatable for insertion and withdrawal of tokens; locking discs function when handle is turned and remain engaged with handle without axial movement of handle during its axial displacement.

52225. Pertrix-Union G.m.b.H. Improvements in or relating to liquid-tight dry cells. Enclosed by sections of

thermoplastic artificial resin which are welded together.

52226. Pilkington Brothers Limited. Improvements in or relating to methods of and apparatus for bending sheets of glass. (June 2, 1954.) Applying the pressure of bending over the marginal areas only of the sheets.

52227. Sandoz, A. G. Process for the preparation of a piperidine derivative. Reacting thenyl-amino-piperidine with monohalogenated benzene.

52228. Void.

52229. Laporte Chemicals Limited. A process for the manufacture of hydrogen peroxide. (July 1, 1953.) [Addition to No. 49736.] In a cyclic process for the production of H_2O_2 by the autoxidation of substituted anthraquinhydrone or quinol, the solvent mixture comprises an aliphatic ester of cyclohexanol or of alkyl cyclohexanol, and one or more benzenes containing one or more alkyl groups.

52230. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the preparation of new polyene dialdehydes and new polyene dialdehydes obtained by this process. Unsaturated 2:7-dimethyl-octane dial is acetalised, the diacetal condensed with a vinyl ether and the product hydrolysed with an acid to eliminate alcohol and to produce 4:9-dimethyl-dodecane dial.

52231. Void.

52232. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to shaft-positioning devices. Adjusting screws screwed into holes in stationary hollow cylinder coaxially arranged with a shaft, the wall receiving the screw having longitudinal guide way facing the shaft comprising a nut movable in the cylinder and an arm to be moved through a selected guide way and the choice of guide way made by a selector member rotatable about the shaft.

JUNE 29.

52233. H. S. Sidhu. Improvements in or relating to electric lamp stands or the like. A hollow body member of a transparent material coats with a base body member and an electric lamp holder forming a hollow enclosure which accommodate a secondary source of illumination.

52234. The Glacier Metal Company Limited. Composite bearing and bearing materials. Comprising matrix of

hard metal or alloy and lining of soft metal or alloy wherein the matrix of material has modulus of elasticity of not less than 23×10^6 lbs. per square inch.

52235. M. Steinschlaeger. Improvements in or relating to the manufacture of synthesis gas. Fuel is burnt with air or steam and the gases are separated by liquefaction, fractionation or hyper-sorption.

52236. D. Napier & Son Limited. Improvements in or relating to the cooling of turbine blades. (July 6, 1953.) Parallel axially projecting ribs or vanes on root portions of blades on rotor form multi-start spiral vanes providing spiral passages through which cooling air is passed.

52237. Ateliers De La Motobecane. Improvements relating to expanding pulleys for variable speed centrifugal devices. Means for temporary immobilisation of the two flanges in their relative movement, so as to stabilise the expanding pulley at one or more determined effective diameters.

52238. Ateliers De La Motobecane. Autocycle pedal assemblies. Crank axle mounted in a tubular bottom bracket forming part of the frame and is characterised in that the axle turns in smooth journal bearings.

52239. Dunlop Rubber Company Limited. Printing means. (July 8, 1953.) Comprising a printing layer of a pigmented plastic composition having shaped pieces of material embedded in it which are insoluble in a solvent for plastic composition.

52240. Organon Laboratories Limited. Improvements in the production of pseudo-sapogenin compounds. (June 30, 1953.) Treating sapogenins or their esters at a temperature below 150°C in a mixture of tertiary base and esterifying agent, in presence of hydrogen halide.

52241. Pertrix-Pnion G.m.b.H. Liquid proof and shock proof galvanic cell, especially rod battery. Wherein the exterior jacket consists of a metal which is in the electro chemical series on the same place or in a neighbouring place to the metal of the inside beaker.

52242. Oskar Biegel G.m.b.H. Verkaufskontor and O. Biegel. Improvements in hose pipe connections and the like. Consisting a nozzle over which the end of a hose is pushed, a coiled spring encircling the hose pipe and means for

applying pressure such that by moving the hose the spring moves into the narrow part of a cone.

52243. John Thompson Water Tube Boilers Limited. Improvements relating to travelling grate or chain grate stokers. (July 3, 1953.) Having a sealing plate which is located vertically adjacent the outer side of each link of the chains nearest to the edges of the stoker, it being mounted on pivots each secured to a different successive link.

JUNE 30.

52244. Void.

52245. F. Wehrli. Improved method and device for the treatment of human blood or plasma. Oxygen or ozone is introduced into blood and foam film formed is irradiated with ultraviolet light.

52246. Z. D. Harza. R. D. Harza and A. C. Hoffman. Improvements in a gate seal for dams and the like. Comprising U-shaped member secured to the sides and bottom of a gate with the open end of the member exposed at the edge of the gate with means for applying pressure within the U-shaped member.

52247. D. Napier and Son Limited. Improvements in or relating to the cooling of turbine blades. (July 6, 1953.) Root portions of adjacent blades on rotor disc enclose between them a cavity having air inlet and outlet passages for cooling air which tends to swirl in the cavity in the manner of vortex before escaping through outlet passage.

52248. N. V. De Bataafsche Petroleum Maatschappij. Apparatus and process for bringing two or more phases into intimate contact with each other. A vertical rotatable shaft fitted in a housing, a series of rotor and stator disc-fitted to said shaft and the inner of the housing, and a feed line leading tangentially into the housing.

JULY 1.

52249. H. S. Sidhu. Improvements in or relating to infant feeding bottles or the like. Removable cover member coacting with the neck of feeding bottle to enclose the nipple.

52250. British Telecommunications Research Limited. Improvements in or relating to electrical signalling systems. (July 3, 1953.) For indicating identity signalling is effected by the use of common tone frequency which is interrupted at a cadence characteristic of the signalling station.

52251. Rohm & Haas Company. Improvements in or relating to epoxidized vegetable oils. Reacting hydrogen with an epoxidized vegetable oil until the degree of unsaturation of the oil is not greater than that represented by an iodine number of three.

52252. Wingfoot Corporation. Improvements in puncture-sealing laminate. Includes a layer of puncture-sealing rubber composition and a layer of an adhesive material.

52253. Wingfoot Corporation. Improvements in puncture sealing compositions. Including a rubber and polybutene.

52254. F. Fuchs. Improvements in or relating to the processing of iron ores particularly for obtaining clean iron powder. Heating and reducing the iron ore, by the action of a continuous cycle of explosions as a result of the inter action of jets of oxygen and hydrogen fed into the furnace.

52255. F. Fuchs. Improvements in or relating to packing boxes. Packing box comprising a container part and a lid part fitting into the container part, the different parts are joined by a hinge joint without a hinge pin.

52256. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to gas-fractionating installations. Condensate is divided into two portions of which one portion is used as washing liquid.

52257. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to trigger circuits. Current supply source in series with primary winding having a high natural frequency, of a feed-back transformer is included in the collector circuit of the transistor, whilst the secondary winding of the transformer, without interposition of frequency-determining capacitors is included between the emitter—and base electrode of the transistor.

52258. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to bored permanent magnets secured to a shaft. A sleeve made of non-porous material is arranged in the bore so as to surround the shaft; and the shaft, the magnet and the sleeve are secured by cement.

52259. The B. F. Goodrich Company. Improvements in or relating to insecticidal compositions. Comprising a chlorinated mixture of camphene, bornyl

chloride isobornyl chloride or a combination thereof and a pinene.

JULY 2.

52260. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to electric arc welding. (July 6, 1953.) Comprising a fixed pivot coaxially mounted on a vertical pipe, an arc welding head mounted on the pivot for rotation about the axis and means mounted on the pivot for rotating on the welding head about the pivot.

52261. Metropolitan - Vickers Electrical Company Limited. Improvements relating to dynamo electric machines. (July 22, 1953.) End turns of the rotor conductors are provided with radial passages.

52262. Massey-Harris-Ferguson (Sales) Limited (formerly named Harry Ferguson Limited). Improvements relating to tractor-trailer hitches. (July 3, 1953.) Trailer hitch linkage having combined with it toggle links adapted to serve as a prop for the linkage when positioned with the hitch raised and idly folded when hitch is lowered.

52263. Standard Telephones and Cables Limited. Improvements in or relating to line identification in telecommunication systems. (July 3, 1953.) Comprises a set of current carrying devices per line the number of devices in each line being equal to the number of digits in the numerical identity.

52264. Void.

52265. Void.

JULY 3.

52266. Automatic Telephone & Electric Company Limited. Improvements in capacitors. (August 5, 1953.) Includes the step of attaching terminal members by threading such members through holes formed towards the end of the capacitors.

52267. J. W. Stott. Improved overpick loom pickers and method of constructing same. A reinforcement extending through each side or face of the striking part of the picker upto or beyond the spindle holes.

JULY 5.

52268. Void.

52269. G. Zuelchaur. Improved thermo-plastic push-fit stopper for bottle and the

- like container. Comprising a flat base portion, the sides of which extend upwards to form a rim and then a double-angle cylindrical flange.
52270. P. K. Kulkarni. Damped moorings for reducing ship movements in harbours affected by range. A piston inside a cylinder containing oil, adjustable orifice through which oil can pass and means for return movement of the piston.
52271. Portasilo Limited. Improvements in or relating to measuring and delivering apparatus and silos and other containers incorporating such apparatus. (July 6, 1953.) Comprising a main frame mounted for pivotal movement, a hopper mounted for longitudinal movement along thereof and provision for applying a counterweight to main frame at a point spaced from its pivotal axis.
52272. Imperial Chemical Industries Limited. Process for the manufacture of sulphuric esters of the leuco derivatives of primary 2-amino-anthraquinones. (July 15, 1953.) Reacting a metal salt of the leuco compound or a complex compound comprising the metal salt of the leuco compound with a sulphating agent in the presence of an amide.
52273. Imperial Chemical Industries Limited. Purification of terephthalic acid. (July 17, 1953.) Heating crude terephthalic acid with water to a temperature between 230°C and 280°C and cooling the solution to a temperature not below 165°C.
52274. Ethyl Corporation. Process for producing tri- β -haloaliphatic thionophosphates. (December 22, 1953.) An organic hydrocarbon cyclic oxide or sulphide is reacted with a trihalide of trivalent phosphorus and sulphur, or with thiophosphoryl halide.
52275. Ethyl Corporation. Improvements in or relating to fuel additives and methods of making the same. (December 22, 1953.) Additive composition comprises an organolead antiknock agent and a neutral haloalkyl ester of a monomeric acid of pentavalent phosphorus, the ester being in quantity not in excess of about 0.50 theory of phosphorus.
52276. Vickers-Armstrongs Limited. Improvements in or relating to machines for forming fold lines in boards or sheets and to containers formed from boards or sheets. (July 6, 1953.) Fold line produced by formation of shear slip planes in board or sheet passed between nip formed by peripheral inter-engagement of rotary fold members.
52277. Vickers-Armstrongs Limited. Improvements in or relating to sealing devices and housings employing such devices. (July 6, 1953.) Two parallel strips of deformable material laid along a groove transverse to direction of leakage to be prevented, and pressing against opposite faces and a wall of the groove, and a fluid forced through a passageway into the groove and the passage sealed to maintain pressure on the fluid.
- JULY 6.
52278. Automatic Telephone & Electric Company Limited. Improvements in telephone systems. (January 16, 1952.) [Divided out of No. 48787; ante-dated to January 14, 1953.] Circuit device comprises two gas-discharge tubes a pulse source connected to trigger electrodes of both tubes and a lead connection to the trigger electrode and cathode of two tubes.
52279. Automatic Telephone & Electric Company Limited. Improvements in telephone systems. (January 16, 1952.) [Divided out of No. 48787; ante-dated to January 14, 1953.] A static switching device is provided individual to each one digit or combination or digits.
52280. AMELIORAR. Improvements in apparatus for the formation of a moistened gas stream, and in particular in apparatus for air conditioning. Means are provided so that the boundary layer formed on the blades by liquid drops is torn away.
52281. G.N.R.D. Patent Holdings Limited. Improvements in or relating to the preparation of steroid substances. (July 13, 1953.) Treating with alkali metal iodide in presence of organic iodine compound which can react with hydrogen iodide to produce iodine.
52282. W. W. Sprague and Company Limited. Improvements in security printing and apparatus therefor. (July 29, 1953.) Void after publication. Each numeral of a serial number printed in association with a frame or outline representative of that numeral.
52283. Imperial Chemical Industries Limited. Foaming composition for cellular concrete. (July 23, 1953.) Comprising an aromatic sulphonic acid and a water soluble cellulose compound.

52284. A. L. Pollard. Fermentation process for the production of a new antiviral substance. By fermenting a nutrient medium under submerged aerated conditions with the organism *Nocardia formica*.

52285. Dunlop Rubber Company Limited. An improved mixing device. Having readily removable toothed rotor and stator in mixing chamber.

52286. J. R. Geigy A.-G. Process for the production of 4-hydroxy-coumarins. A malonic acid diaryl ester is reacted with $AlCl_3$.

52287. Caroline Elisabeth-Stiftung. Dry cell or battery. Electrodes consist of fibres which are assembled to form a loose structure.

52288. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to optical devices for use in X-ray image amplifiers. Comprising an optical pivot joint connected by a viewing tube to eye-piece and by a second viewing tube to second optical pivot joint arranged at the housing of image amplifier at its optical axis, about which the assembly of viewing tubes and optical joints is adapted to rotate.

52289. Standard Telephones and Cables Limited. Improvements in or relating to apparatus for measuring a succession of time intervals. (July 7, 1953.) Comprising a storage device moving past recording and reading devices in turn.

52290. Laporte Chemicals Limited. Improvements in or relating to the catalytic reduction of anthraquinone derivatives and to the manufacture of hydrogen peroxide. (July 7, 1953.) In presence of palladium catalyst comprising metallic palladium deposited on siliceous carrier treated with aqueous alkali.

52291. Ciba Limited. Process for the manufacture of new anthraquinone vat dyestuffs. Reacting a 5:5'-diamino-1:1'-dianthrimide-carbazole with an anthraquinone-2-carboxylic acid.

52292. W. Myhre. Improvements in hoisting cranes adapted for permanent mounting upon automobile freight carriages. Winch drum mounted within the jib and directly coupled to an oil motor mounted on the outer side of the jib.

52293. K. Abildgaard-Elling. Method for the production of 1-methyl-17-

ethinyl-estradiol. Reacting 1-methyl-estrone with a metal compound of acetylene.

52294. Metropolitan-Vickers Electrical Company Limited. Improvements in or relating to protective arrangements for dynamo-electric machines. (July 24, 1953.) Includes low current relay means is energised in dependence on the total load current drawn by the main and auxiliary motors.

52295. Garware Finance Corporation Limited. Improved thermo-plastic closures for rigid, semi-rigid or flexible containers. The closure has a peripheral groove with its edges tapered so that a correspondingly shaped rim of a container is gripped therein.

JULY 7.

52296. Void.

52297. Whiffen & Sons Limited. Production of emetine. Unground ipecac extracted with an aqueous mineral acid.

52298. The National Research Development Corporation. Improvements in or relating to ditching machines. (May 20, 1954.) Comprising a transverse beam pivotally mounted by one end to one side of a vehicle and a rotary cutter mounted on the outer end of the beam.

52299. American Flange & Manufacturing Co. Inc. Closure bange-container wall combinations. (June 14, 1954.) The combination of a container wall formed with an opening having a closure flange, interengaging means, and means for securing closure flange in place.

52300. W. & T. Avery Limited. Improvements connected with the feed mechanism of automatic weighing apparatus. Providing a chute above the weigh conveyor to receive material from the feed conveyor said chute being independently connected to the adjustable gate of the hopper so as to change the line of position of the material.

52301. Roneo Limited. Improvements in or relating to filing systems. (July 31, 1953.) An indicating tab is provided which can be tilted upwardly or downwardly or can face in horizontal direction when pocket is in place.

52302. The Mining Engineering Company Limited. Connecting pins for flat link chains. The pin has a head and shank portion of metal and a further metal portion bonded to the shank portion by rubber so as to protrude eccentrically from the wall of the shank, the bonding

material being deformable to permit the protruding part to shift into alignment with the wall of the shank.

52303. British Insulated Callender's Cables Limited. Improvements in or relating to insulated electric cables and impregnating compounds therefor. (August 5, 1953.) [Addition to No. 48935]. The compound consists of wax and mineral oil.
52304. Farbenfabriken Bayer Aktiengesellschaft. Agents with action against attacks by termites. (December 31, 1953.) Incorporating chloro-substitution products of 2 or 4-hydroxy diphenyl in wood, resin, leather and textiles.
52305. Standard Telephones and Cables Limited. Sizing of thermo-plastic cable cores. Passing the thermoplastic material through a heated die.
52306. Standard Telephones and Cables Limited. Improvements in or relating to terminating arrangements for armoured electric cables particularly suitable for submarine cable repeater housings. (July 8, 1953.) Means for clamping armour wires to housing in interlocking relation therewith whereby rotation between the housing and cable is prevented and means for grading the flexibility of the cable adjacent to the housing.
52307. Standard Telephones and Cables Limited. A moisture tight seal permitting the passage of an insulated conductor through a pressure resisting bulkhead. (July 10, 1953.) Comprising insulating bush with central bore, fitting within a passage through the bulkhead, sealing means between the bush and passage walls, a metal rod through the central bore and having an enlarged head joined to external conductor and having a surface soldered to a metallised surface on the bush end surrounding the aperture.
52308. Standard Telephones and Cables Limited. Improvements in or relating to electric pulse communication systems (September 24, 1953.) Comprising similar counting stages each consisting of two condition trigger device, means for supplying a train of timing pulses, simultaneously to all stages, means for delaying output pulse generated by each stage, and means for applying the delayed output to unblock the next succeeding stage.
52309. Standard Telephones and Cables Limited. Improvements in or relating to cold cathode gas-filled electric discharge tubes. (September 2, 1953.) [Addition to No. 49345.] Comprising pairs of anodes co-operating with a common cathode such that a transmission path, at least for audio frequency signals, is established between the two anodes of each pair and means isolating from other like gaps discharges at separate pairs of gaps to prevent undesirable cross-fire or cross-talk between several transmission paths.
52310. Maschinenfabrik Augsburg-Urnberg Aktiengesellschaft. Improvements in and relating to pump installations. Each pump in the installation separately driven and individually connected up selectively from position of rest to pump or pump group that was previously working.
52311. J. Lecher. Improved apparatus and method for disintegrating and classifying dry materials (May 11, 1954.) Disposed on a horizontal axis and having uniform tangential controlled air and feed supply and a uniform axial distribution of grinding and classifier surface.
52312. Chamberlain Industries Limited. Improvements in machines for bending workpieces. (December 9, 1953.) Providing a clamping means which is displaceable through the desired bending angle by a fluid pressure actuator.

JULY 8.

52313. Metropolitan-Vickers Electrical Company Limited. Improvements relating to liquid seals for gas-cooled dynamo electric machines. (July 9, 1953.) Cylindrical sealing member is provided intermediately of the end flanges of greater and lesser diameter.
52314. Hoover Limited. Improvements relating to electric irons. (October 26, 1953.) Steam passages from a boiler lead to a number of outlet ports opening through the ironing surface.
52315. Marconi's Wireless Telegraph Company Limited. Improvements in or relating to frequency modulated oscillation generators. (July 8, 1953.) Of the kind in which the frequency is modulated by varying the phase shift introduced in a positive feed-back loop between output and input of an amplifier.

JULY 9.

52316. B. M. Watson. Improvements in or relating to a method of removing impurities from oils, and fats. Subjecting glyceridic oils and fats to superheated steam wherein the amount of steam is substantially twice the quantity of the non-oil constituents of fats or oils.
52317. D. L. Hair. Improvements in covered sliding clasp fasteners. Inter engaging members of opposite chains attached to tapes, a tooth and a recess on opposite sides of each member, a stopper adjacent to each tooth; slider for engaging opposite members bring up hard edge of body of one member hard against stopper on other body; any pull on tape or material attached to tape engages contacting parts more firmly.
52318. Stamicarbon N.V. Process for the separation of insoluble protein from a starch suspension. Continuously feeding a starch suspension and a gas to a hydrocyclone in such a manner that the gas becomes finely dispersed in the suspension.
52319. Western Electric Company, Incorporated. Improvements in or relating to electrone discharge devices and to electron sources therefor. (September 9, 1953.) Comprising evacuated envelope with a hollow body closed except for one or more electron egress apertures, the inside of the body being coated at least directly adjacent the aperture with electron emissive material and a heater for the body.

JULY 10.

52320. Dipl.-Ing. R. Nowak and Dipl.-Ing. E. Hasse. Process for the improvements of surfaces of metals, in particular iron and steel. Work pieces are subjected to the effect of such subhalogenides of the diffusion element which react with the basic metal in the form of a heterogenous chemical replacement reaction.
52321. Void.
52322. Dunlop Rubber Company Limited. Improvements in or relating to belting. (July 14, 1953.) Passing the thermoplastic coated ply or plies of fabric through hot air to fuse the composition and then cooling the same while subjected to pressure between the peripheral surface of a rotating drum and an endless tensioned steel band.

JULY 12.

52323. Imperial Chemical Industries Limited. Incendiary compositions and articles comprising same. (September 25, 1953.) Characterised in that thermoplastic compositions, admixed with pulverulent oxidising and reducing agents, comprises at least of natural rubber or polymerised diene or balata.
52324. Chas. Pfizer & Co., Inc. Improvements in or relating to antibiotics and the preparation thereof. (May 13, 1954.) Cultivating streptomyces antibioticus No. 15784-1 in aqueous nutrient medium under aerobic conditions.
52325. V. B. Chipalkatti, K. V. Datye and M. S. Tawakley. An improved process for the production of shrink proof and crease resistant finishes on textile material. Impregnating fabrics with an aqueous solution of a carbohydrate derivative of urea or its homologues in presence of an aldehyde and an acid catalyst.
52326. Oesterreichisch-Alpine Montangesellschaft. Process and arrangement for the purification of smoke and waste gases. Gases are scrubbed with a liquid having surface tension lower than water.
52327. Metropolitan - Vickers Electrical Company Limited. Improvements relating to dynamo electric machines. (July 13, 1953.) Binding ring around the end turns of the rotor winding is formed in two or more sections of the end faces.
52328. Cassella Farbwerke Mainkur Aktiengesellschaft. Manufacture of dihydrazinodiazine derivatives. Iminoisoindolenine derivative is reacted with at least three moles of hydrazine.
52329. Ciba Limited. Manufacture of steroids. Subjecting compounds of pregnane series to the action of enzymes produced by aerobic cultures of fungi of genus *Ophiobolus* or *Sclerotinia*.
52330. The Singer Manufacturing Company. Sewing machine face-plate comprising a vertically disposed plate-like body having a horizontally disposed shelf projecting from the plate and having means for locking the face-plate with the head.
52331. R. W. Young. Improvements relating to the manufacture of lightweight cellular material from clay. Clay is brought to the form of a stiff paste by mixing it with a foam.

JULY 13.

52332. W. Paterson. Improved method of and apparatus for effecting clarification of liquids from finely suspended solids. (July 20, 1953.) The liquid is introduced over substantially the whole floor area of a sedimentation tank by numerous, restricting orifices.

52333. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for preparing a new polyene diadehyde and the new polyene dialdehydes obtained by this process. By acetalizing C_{14} dialdehyde, condensing the C_{14} diacetal obtained with a propenyl ether and treating the C_{20} dietheracetal obtained with an acid.

52334. Ciba Limited. Hormone preparations. The preparations contain testosterone undecylenate, testosterone, valerate, testosterone propionate and a pharmaceutical carrier.

JULY 14.

52335. Council of Scientific and Industrial Research. Preparation of aluminium-silicon alloys. Aluminium-silicon alloys prepared by aluminothermic reduction of quartz.

52336. Westinghouse Brake & Signal Company Limited. Improvements relating to apparatus for supplying intermittent overload currents from voltage regulated rectifier sets. (July 24, 1953.) Overload rectifier with D.C. output connected across load in parallel with D.C. output of main rectifier has no-load D.C. output voltage below constant voltage of main rectifier over predetermined range of current.

52337. Westinghouse Brake & Signal Company Limited. Improvements relating to vacuum brake cylinders for vehicle brakes. (July 28, 1953.) Nut threaded on end of piston rod held from rotation during screwing of the rod into or out of the nut which is free to be rotated to predetermined degree relative to rod without screwing or unscrewing.

52338. Bharat Bhushan and S. H. Zaheer. Process for the production of pesticidal compounds from turpentine oil. Treating oil with chlorine to get chlorine content therein between 50 per cent.—68.5 per cent.

52339. E. J. J. Henriksen. Improved writing instrument, especially ball point pen. The sealing member following the

ink column in the reservoir is constituted by a liquid or pulpy mass.

JULY 15.

52340. International Business Machines Corporation. Improvements in calculating machines. (May 26, 1954.) Comprises electronic calculating devices, electro-mechanical storage devices and register devices.

52341. A. C. J. Opfermann. Process for the production of iron-containing organic compounds. Precipitation of a solution of the alkaline-earth salt of α - γ dihydroxybutyric acid with a ferric salt of an acid.

52342. Champalal Gupta. Preparation of colloidal suspension suitable for use as blood plasma substitutes. Consisting of polyvinyl pyrrolidone in normal saline solution adjusted to pH value 7.

JULY 16.

52343. Rheinpreussen Aktiengesellschaft fuer Bergbau und Chemie. Process for separating carbon dioxide from gas mixtures. (June 11, 1954.) Contacting with wash liquor to bind CO_2 at above $50^\circ C$ and pressure i.e. partial pressure of CO_2 is greater than an atmosphere.

52344. V. B. Chipalkatti, C. R. Das and K. V. Datt. A process for retarding the degradation of cellulose in the acid treatment of textiles. Carrying on the acidic finishing treatment in the presence of an alkali metal salt of phosphoric acid.

52345. "Rade Koncar" Tvornica Električnih Strojova. Improvements in stators for electrical machines. Angularly displaced stacks of square stator plates held between pressure rings and surrounded by centrifugally cast stator jacket; pressure rings and radially directed crests formed by corners of stator plates cast partly into the jacket.

52346. Skanska Cementaktiebolaget. Pneumatic apparatus for intermittently conveying cement and the like abrasive pulverulent materials. The valve for feeding materials to the tank are manufactured of a ceramic material.

52347. Radio Corporation of America. Temperature controlled semi-conductor bias circuit. Including semi-conductor device having base, emitter and collector electrodes and biasing means comprising temperature responsive means

arranged to vary the bias value to minimize temperature variations on the operations thereof.

52348. Void.

JULY 17.

52349. "Shell" Refining and Marketing Company Limited. Compositions suitable for use as hydraulic fluids. (July 17, 1953.) The composition comprises a liquid trialkyl phosphate containing at least 12-C-atoms in the molecule, an acrylic ester-polymer and a liquid chlorinated or fluorinated hydrocarbon having a boiling point above 75°C.

52350. J. Dungler. Improvements in padders, i.e. padding machines. Terminal plates extend to a substantial height above the rolls and providing lateral walls the outer edges and the lower parts of which engage fluid-tightly the terminal plates.

52351. Imperial Chemical Industries Limited. New leuco sulphuric ester dyestuffs derived from anthraquinonyl oxidiazoles. (August 4, 1953.) Treating vat dyestuffs with a sulphating agent in the presence of a metal and a tertiary base or an organic amide or treating a metal salt of the leuco derivative with a sulphating agent.

52352. G.N.R.D. Patent Holdings Limited. Improvements in or relating to the separation of saturated and unsaturated keto-steroids. (July 31, 1953.) The mixture is reacted with Girard reagent T or P, then treated with a water soluble aldehyde to liberate saturated ketones, the pH of the aqueous medium is thereafter lowered to liberate the unsaturated ketones.

JULY 19.

52353. Void.

52354. Void.

52355. Imperial Chemical Industries Limited. Improvements in and relating to the cold-drawing of tubular films of organic thermoplastic materials. (July 31, 1953.) Comprising the step of decreasing the distance between the two pairs of pinch rolls through which the tubular film is passed, after a volume of fluid has been introduced into the film.

52356. Imperial Chemical Industries Limited. Improvements in or relating to the production of thin-walled tubing or tubular film from organic thermoplastic materials. (July 31, 1953.)

Passing the inflated tubing through a passageway which is circular in cross section and which is interiorly bathed by a downwardly flowing cooling liquid which contacts the external surface of the tubing.

52357. Societe Des Usines Chimiques Rhone-Poulenc. New antibiotic and process for its preparation. (September 7, 1953.) Cultivating aerobically a strain of streptomyces 3486 in a nutrient medium.

52358. E. D. O. Bernier. Improvements in or relating to plastics reinforced by composite chenille threads made from textile materials and metal wires. Reinforcing plastic material by chenille threads or fabrics made of chenille threads.

52359. The General Electric Company Limited. Improvements in or relating to electric circuit arrangements for operating low pressure electric discharge lamps. (June 17, 1952.) [Divided out of No. 49712; ante-dated to June 11, 1953.] Capacitor connected parallel to the lamp and a non-capacitive impedance in series with the capacitor and grid-controlled thermionic valves, the valves of the capacitor and impedance being such that they provide power factor correction and the impedance limits the current surges through the valves.

52360. Unilever Limited. Improvements relating to proportioning pumps. (July 20, 1953.) Piston in one of the main cylinders and piston in the secondary cylinder driven by common crank carry out their strokes simultaneously, each of the plurality of cranks transmits same amount of power.

52361. Ciba Limited. Dyestuff preparations and dyeing or printing processes using them. Containing at least two vat dyestuffs of similar constitution but not isomeric with one another and which dyestuff contain at least one anthraquinone nucleus.

JULY 20.

52362. British Insulated Callender's Cables Limited. Improvements in or relating to electric cables and condensers. (August 13, 1953.) Composition containing petrolatum and a low dielectric loss synthetic hydrocarbon wax.

52363. Simon-Carves Limited. Improvements relating to the processing of coal and other carbonaceous materials. (July 27, 1953.) Treating the mineral

in finely ground form with a gaseous chlorinating agent between 200—600°C.

52364. Dunlop Rubber Company Limited. Resinous reaction products and their method of preparation. [Addition to No. 51120]. By reacting lower aliphatic ketone, phenol derived from natural source and rubbery copolymer containing carbonyl groups.

52365. Estirajes Balmes S. A. Improvements in mechanism for applying pressure to the drafting rollers of spinning and other textile preparation machinery. Pressure being applied to the top rollers by a rod connected to a fulcrum carrying an operating lever, a hooked end of the rod engaging a slot in a spring loaded weighting rod.

52366. Void.

52367. Standard Telephones and Cables Limited. Improvements in or relating to thermionic cathodes. (August 14, 1953.) Active cathode material is formed from a pressed and sintered mass of mixed powders of nickel or and thermionically emissive alkaline earth material.

52368. Standard Telephones and Cables Limited. Improvements in or relating to band driving arrangements and to arrangements for driving magnetic storage devices. (August 14, 1953.) Driving means comprises means for directing a flow of gas against the surface of the member to be driven.

52369. Standard Telephones and Cables Limited. Improvements in or relating to radio communication systems employing frequency modulation. (September 21, 1953.) Comprising repeater stations each having means for transforming the frequency of modulated carrier waves, the repeater station circuits being so disposed that a reversal of the sense of the phase or frequency deviation occurs in the transforming means in at least one of said repeater stations and that no such reversal occurs in the transforming means in at least another of said repeater stations.

52370. Societe D'Electro-Chimie, D'Electro-Metallurgie et des Acieries Electriques D'Ugine. Improvements in or relating to the desulphurisation and desiliconising of cast iron. (April 29, 1954.) [Addition to No. 50304]. For oxidising silicon, the reducible oxides in the slag are replaced wholly or in part by an addition of gaseous oxygen or oxygen containing gas or gases.

52371. S. Steuerman. Method and means of surface compacting soil ground and similar granular materials. A vibratory means produces horizontal forces effective in opposed directions and compacts the soil.

52372. Void.

52373. Boots Pure Drug Company Limited. New acaricidal preparations. The preparation comprises benzyl p-chlorophenyl sulphide and a carrier or a diluent.

52374. E. P. Keogh Proprietary Limited. A preparation for the control of moulds, bacteria and the like. (July 20, 1953.) Which includes a substance which is fungicide and a plant hormone.

JULY 21.

52375. Mrs. Mona Ashu Shivdasani. Improvements in or relating to toilet hair combs. Combs with wavy teeth.

52376. Void.

52377. Continental Oil Company. Improvements in or relating to apparatus for determining travel time of signals. A signal which is made up of a succession of energy pulses and which is non-repetitive during a time interval at least as long as the travel time under investigation, is applied to the medium, time series respectively representative of the transmitted signal and the delayed signal are generated and said time series are correlated.

52378. Siemens Brothers & Co. Limited. Improved arrangements for the selection of a free one of a number of circuits in a group. (October 9, 1953.) Circuits represented intersection of coordinates, negative resistance device arranged in sets.

52379. J. Dungler. Improvements in drying of fabrics, papers, cardboard and other sheet materials. Some components of treating fluid by treating effect is induced to emit radiations.

52380. Socony Mobil Oil Company, Inc., formerly known as Socony Vacuum Oil Company, Incorporated. Acoustic well logging apparatus. Comprising means responsive to one transducer for generating voltage, a capacitive element, a circuit including a normally open switch interconnecting them, and means responsive to a second transducer for momentarily closing said switch to charge capacitive element to a voltage in proportion to magnitude of voltage

at the instant of arrival at second transducer.

52381. D. Waldie & Co. Ltd., and M. Rajagopalan. Process for the extraction of metallic zinc and elemental sulphur from zinc sulphide ores and/or concentrates. Treating zinc sulphide with aqueous hydrochloric acid and/or wet hydrogen chloride electrolysis the zinc chloride and obtaining sulphur from hydrogen sulphide.

52382. Void.

52383. L. E. Svensson. Method of filling cavities of hollow bodies, particularly of projectiles. Cavity is filled with a filling material and is allowed to solidify with heat exchange.

JULY 22.

52384. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to slag forming bodies for use in butt-welding. A slag forming body having an opposing cavity with an aperture larger than the cross-section of the pin and a volume larger than the volume of the pin which penetrates the body after local softening.

52385. Y. Liljamo. Method of treating straw in order to obtain a material suitable for industrial purposes, especially as insulating and filling materials. Characterised in subjecting chopped short pieces to lengthwise slitting action.

JULY 23.

52386. Void.

52387. Ogale Glass Works Limited. Improved wick stove and fuel feed system for the same. Comprising a stand having a circular combustion trough having a fuel feed system including a fuel tank fitted with a spring loaded valve means operating on gravity system, pipes connecting oil tank and circular combustion trough, an oil regulator, a circular wick seated in the trough, and a burner attachment.

52388. Void.

52389. Void.

52390. Void.

52391. Godrej & Boyce Manufacturing Company Limited. Improvements in or relating to metal, particularly steel, cupboards and like articles of furniture chests, boxes and like containers. One of the meeting angle edges has secured

to it or made integrally with it a member which provides an arm or limb.

52392. The Mond Nickel Company Limited. Process and apparatus for making additions to liquid metal. Into molten metal is introduced addition agent in a pressure vessel by a plunger which passes through an inlet opening in the vessel and which in its innermost position closes the inlet opening.

52393. Artbangle Limited. Improvements in or relating to spectacle frames. Provided with two shields in pads in which one is just above the hinge point of the lens frame and the other just below said hinge point.

JULY 24.

52394. Council of Scientific and Industrial Research. A process for the electrolytic preparation of cuprous oxide. Sodium chloride and an alkali are electrolysed in a cell with sheet copper as cathode and refined copper as anode.

52395. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electrically-conductive slag forming bodies for use in butt-welding. Electrically-conductive slag forming body characterised in that the electric conductivity of the body necessary for the ignition of the arc flame when the welding current is switched on is brought about by the presence of reduced titanium dioxide.

52396. R. A. Lister & Company Limited. Improvements in or relating to internal combustion engines and pistons therefor. Inlet orifice to combustion-space cavity in piston formed by inwardly tapering throat; wall of cavity having peaked land projecting towards orifice formed as surface of revolution about axis co-axial with land and inlet orifice; generatrix of the surface has greater radius of curvature adjacent the land than orifice.

52397. Void.

52398. Void.

52399. H. J. Longley. Improvements in or relating to steering devices for vehicles. Pair of unequal gears turned by steering column turn one of the wheels of the front or rear pair through a greater angle than the other.

JULY 26.

52400. Inventa A.G. für Forschung und Patentverwertung. Process for the continuous production of polyamide shaped

- bodies. (June 17, 1954.) Polymerization of caprolactam is effected at an elevated pressure and in presence of a maximum amount of 1 per cent. of water.
52401. Dunlop Rubber Company Limited. Composite and products of rubber and textile material. (August 1, 1953.) [Addition to No. 42620.] Containing an aryl substituted phenol or a halogenate derivative thereof.
52402. Dunlop Rubber Company Limited. Composite products of synthetic resins and textile materials. (August 1, 1953.) Wherein resin contains a hydroxyaryl compound having at least two aryl groups.
52403. B. B. Chemical Company Limited. Improvements in or relating to thermoresponsive adhesives and to apparatus for handling the same. The adhesive rod has grooving extending along it to facilitate coiling and to expose increased surface area to heat.
52404. Universal Oil Products Company. Improvements in or relating to antioxidant compositions and food products stabilized therewith. Antioxidant comprising 30 to 70 parts by weight of butylated hydroxyanisole and 70 to 30 parts by weight of 2, 4, 6-trialkylphenol.
52405. A. G. Heron. Improvements in or relating to the defrosting of refrigerating apparatus. The heating means is in the form of a heating cable having a central conductor surrounded by a refractory insulating medium encased by metallic casing.
52406. W. G. Mullen. Dampening system in lithographic printing machines. (December 22, 1953.) Comprising air nozzle adapted to direct a stream of air at a negative angle with respect to normal to printing plate.
52407. Westinghouse Air Brake Company. Fluid pressure brake equipment. Graduated release type brake control valve device with quick service means for positively transmitting reduction in brake pipe pressure in desired minimum time from on braked car to another and for preventing leakage.
52408. General Electric Company. A resinous composition for use as coating for wire insulation and an insulated electrical conductor coated therewith. Comprising 5 to 50 per cent. of phenol-aldehyde resin, 95 to 50 per cent. polyvinyl formal resin and 0.1 to 5 per cent. of an amino compound-aldehyde condensation product.
52409. Genatosan Limited. Manufacture of dihydro-pyridazinedione. Reacting hydrazine hydrate with excess of maleic anhydride in aqueous medium.
52410. British Telecommunications Research Limited. Improvements in or relating to electrical signalling apparatus. (August 7, 1953.) Including a transmitter, a receiver, electrically operable switch means and a control circuit.
52411. British Telecommunications Research Limited. Improvements in and relating to electric filter circuits. (August 27, 1953.) Consisting a plurality of conducting strips arranged parallel to one another and to a common conductor to form a plurality of transmission lines.
52412. British Telecommunications Research Limited. Improvements in and relating to electric signalling system. (September 21, 1953.) Including a first and a second station, each station comprising a transmitter and a receiver, the first station having frequency shifting and restoring means.
- JULY 27.
52413. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to materials consisting of paper impregnated with phenol-aldehyde condensates. Wherein the raw material of the paper used is subjected to more than one wet grinding operation and an intermediate drying process.
52414. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to devices comprising two gaseous and/or vapour-discharge tubes stabilized capacitively and inductively respectively. Wherein the circuit of the tube stabilized capacitively is connected, in series with part of the series-impedance of the tube stabilized inductively to the connecting members of the device and the heating-current windings of the tubes are connected in a particular manner.
52415. Massey-Harris-Ferguson (Sales) Limited (formerly named Harry Ferguson Limited). Improvements in or relating to implements for attachment to tractors. (July 30, 1953.) A transverse member, a plurality of laterally spaced fore and aft support arms which are adapted for attachment to the tool carrying means.
52416. E. C. E. Hemsted. Improvements in and relating to the production of

soluble fibres and filaments. (August 5, 1953.) A mass of fibres insoluble in water is loaded with the desired chemical, and then subjected to a conversion treatment.

52417. Ciba Limited. New monoazo-dyestuffs and process for making same. Coupling diazo compounds of the benzene series with 5-pyrazolones.

52418. N. V. De Bataafsche Petroleum Maatschappij. Curing glycidyl polyethers with m-phenylene diamine. A hardening agent comprising m-phenylene diamine is applied for hardening the polyether.

52419. A. H. Hunt (Capacitors) Limited. Improvements in or relating to electrical capacitors. (July 31, 1953.) In which dielectric metallised on opposite faces is produced in strip form with an unmetallised margin on one face running down one edge of the strip and on the other face down the opposite edge of the strip, while winding two faces are never in contact with each other and connection is made by metal spraying.

52420. A. H. Hunt (Capacitors) Limited. Improvements in or relating to the manufacture of electrical capacitors. (July 31, 1953.) [Addition to No. 41317]. The dielectric strip is metallised on both faces and the continuous non-metallised portion which subdivides the metallised surfaces is given such a form on both faces that when the capacitor is wound from the strip, metallised areas only of the same polarity come in contact with one another.

52421. L. Woolcott. An article of furniture convertible for use as a bed. Pair of channel-like casing sections adapted to assume upstanding positions to form vertically divided casing and also laid-down aligned positions presenting channels, bases of which present horizontal surface for supporting bedding; part blanking off outer end of one or each channel is at top or constitutes top of casing in upstanding position.

52422. The Mining Engineering Company Limited. Improvements in conveyors. (August 4, 1953.) Having separate carrying and tension elements and means for directing the carrying and return strands to run into separate parallel tracks.

52423. British Insulated Callender's Cables Limited. Improvements in terminations and joints for high voltage

electric cables. (August 11, 1953.) Insulating sleeve applied to core to control distribution of electric field in and around unscrewed part; two longitudinally spaced electrodes located near earthed and high voltage ends form series of condensers extending radially outwards from core, having common outer electrode and connected in series between core screen and core conductor.

52424. Union Carbide and Carbon Corporation. Primary galvanic battery and method of making same. (June 1, 1954.) A layer of soft sealing compound provided between overlapping portions of each nested thermoplastic trays.

JULY 28.

52425. Satya Brata Ghose. Improvement in electric switch. Flat bar with twisted edges contacting through all points on rotation of corresponding stant terminal surfaces and spring to exert pressure thereon.

52426. Void.

52427. D. Napier & Son Limited. Epicyclic transmission gearing. (August 17, 1953.) Sunwheel is supported to have limited movement in all direction normal to its axis of rotation against the action of resilient means.

52428. Dronsfield Brothers Limited, and S. W. Dronsfield. A device for driving the cylinder and/or doffer of a carding engine for the application of card clothing. Electric motor for driving gear wheel on cylinder or doffer shaft carried by a yoke extending about and supported by upper portion of gear wheel to be relatively rotatable; means for maintaining yoke in fixed angular position and power take off means from motor for gear wheel and tension head.

52429. Houilleres De Bassin De Lorraine. Method of producing metallurgical coke. Small coal is submitted to dedusting operation and then carbonized.

52430. H. V. Fraunhofer and H. E. Coote. Improvements in and relating to colour photographic processes and materials. (July 29, 1953.) Producing negative separation images from at least three colour sensitive emulsions comprising developing exposed negative, applying a take-off material with metallic sulphide to produce an image in silver sulphide and the take-off material of the uppermost image in the negative then applying further take-off material to produce an image similarly on it of

an image in a layer of negative material below the uppermost layer.

52431. Merck & Co., Inc. Antiviral substances and process for preparing the same. (July 26, 1954.) By contacting the fermentation broth produced by organism *Nocardia formica* with an adsorbent material, submitting the eluted adsorbed material to chromatographic purification and then collecting fraction having a pH below about 6.0.

52432. The Parker Pen Company. Writing instrument. Provided with a ball point which is adapted for rotation and for forward and rearward movement.

52433. Universal Oil Products Company. Process for producing materials substantially consisting of or containing alumina. Reacting aluminium metal with water in liquid phase in absence of added acid and in presence of a minor molal proportion of a catalyst selected from the group consisting of mercury and compounds thereof.

52434. Ciba Limited. Manufacture of new esters. Reacting a benzoic acid substituted in the p-position with a poly-(1:2)-glycol or a functional derivative thereof.

JULY 29.

52435. Elektroprojekt. Improvements in or relating to tower with diagonal braces for aerial transmission lines. Diagonal bracings pre-tensioned to such extent that no compressive stresses may occur in them at greatest possible loading of the tower.

52436. Roskilde Medical Company Ltd. (R.M.C.) (Danske Andelsslagteriers Konserverfabrik A.m.b.A). Method for the production of insulin with increased zinc content. Wherein insulin in the presence of ammonia or organic media such as weak organic bases, phenols organic acids, alcohols, ketones and their halogen or thio derivatives, is reacted with zinc compounds.

52437. West Point Manufacturing Company. Method and apparatus for detecting the occurrences of imperfections in strand material. A scanning device capable of projecting a beam of light of uniform intensity which surrounds the strand moving relatively to the beam, a light sensitive device and a circuit.

52438. Esso Research and Engineering Company. Improved residual fuel. Contain complex of Ca, B or Mg soap

of organic acids having 1—5 C-atoms and 16—22 C-atoms per carboxyl group.

52439. Void.

52440. N. V. Philips' Gloeilampenfabrieken. Improved method of producing a non-vaporising getter for use in electric discharge tubes or other vacuum vessels and getter produced by carrying out this method. Powdered gas-absorbing metal is mixed and compressed with powdered non-vaporising elements which may or may not be alloyed with one another aluminium, silicon, beryllium, cerium, lanthanum and cerium mixed metal.

52441. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for recemizing optically active 1-(p-methoxybenzyl) -2- methyl - octahydroisoquinolines. Oxidizing optically active compound with H_2O_2 , treating the mixture obtained with alkali hydroxide and distilling tetrahydrostilbene under reduced pressure.

JULY 30.

52442. The Chloride Electrical Storage Company Limited. Improved separators for use in lead acid electric accumulators. (July 30, 1953.) Fibres of soft wood, a siliceous type fillers, a binding agent and a wetting agent.

52443. The Chloride Electrical Storage Company Limited. Improvements in separators for use in lead acid type electric accumulators. (July 30, 1953.) A sheet of fitted fibre having bonded to one surface of it sintered thermoplastic resin powder in the form of ribs and/or a surface layer.

52444. Columbia Ribbon and Carbon Manufacturing Company, Inc. Planographic printing. (October 26, 1953.) Comprising untreated paper base carrying coating of hydrophilic oleophobic colloid and in superposition a coating of colloid free from filler which is image-receptive and hydrophilic when dry and image-retentive but greasy-ink repellent when wet.

52445. Columbia Ribbon and Carbon Manufacturing Company, Inc. Planographic printing. (October 28, 1953.) Comprising flexible paper, an image-receptive oleophilic hydrophobic undercoating covering a surface of said sheet, a single planographic surface coating of a hydrophilic colloid adherent to said undercoating and being continuous and of a weight not exceeding 6 lbs. per

and an ink receptive water-repellent image on the surface of said plate permeating said surface coating and attached to image-receptive surface.

52446. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius and Brüning. Process for the production of khaki dyeings. Coupling a diazo-compound of an amine with 1-(3'-hydroxy-diphenylene - oxide-2'-carboxyl-amino)-naphthalene.

52447. M. A. Chaudary. Improvements in or relating to spinning yarn from cotton, wool, silk and like fibres. [Addition to No. 48476.] Providing four or more spindles on both sides of the spinning frames and driven by a single tape.

JULY 31.

52448. The Midland Tar Distillers Limited. Method of treating mineral particles or mineral lumps such as in treatment of road surfaces and the stabilisation of soil. Mineral lumps are treated with chlorinated tar bases and tar oil, bitumen or pitch.

52449. Void.

52450. Ciba Limited. Manufacture of polyoxygenated steroids. By reacting a steroid which is non-oxygenated in at least two of the 11-, 17-, and 21-positions, with enzymes from fungi capable of introducing oxygen in the said positions.

52451. The General Electric Company Limited. Improvements in or relating to electric discharge lamps. (July 31, 1953.) Included within the envelope sodium and a filling of neon gas and a small quantity of xenon and/or krypton, with or without argons.

52452. Imperial Chemical Industries Limited. Water soluble organic nitrogen compounds for the treatment of cellulosic or polyamide textile materials. (August 14, 1953.) Treating textiles with compounds obtained by heating of a biguanide and a linear polyalkyleneimine.

52453. Imperial Chemical Industries Limited. Process for the manufacture of new dyestuffs. Heating a glycol or functional derivative thereof with an alkyl ester.

52454. G.N.R.D. Patent Holdings Limited. Improvements in or relating to the preparation of steroid substances. (August 7, 1953.) Reducing 3-keto-2-iodo- Δ^4 -steroids with hydrogen iodide.

52455. The English Electric Company Limited. Improvements relating to electric relays and to circuits incorporating such relays. (August 28, 1953.) Two magnetically separate yokes one with current coil other with a voltage coil and means to prevent pick up of the relay except by energisation of the voltage coil.

AUGUST 2.

52456. Void.

52457. Void.

52458. Automatic Telephone & Electric Company Limited. Improvements in telephone systems. (August 7, 1953.) One of a plurality of registers is arranged to be connected up to receive dialled digits representative of the destination.

52459. Automatic Telephone & Electric Company Limited. Improvements in telephone systems. (August 7, 1953.) Association of a register with a connection takes place in response to the dialling by the calling subscriber of at least one distinctive digit.

52460. Imperial Chemical Industries Limited. Treatment of polyamide textile materials. (August 14, 1953.) Treating the textile material with a reaction product of dicyandiamide, cyanamide or guanidine with a linear polyalkyleneimine.

52461. L. L. Lechene. Method of applying fibers of rotary brushes to the core thereof and assembled fibres therefor. A mat of brush stock fibre is applied over the spiral groove of a cylindrical brush core, the core is given a rotary motion and a cable is applied over the mat and over the groove to force the midportion of the fibre into the groove and finally secured.

52462. Ruston-Bucyrus, Ltd. Improvements in or relating to rotary well drills. Comprising in combination a base supporting a derrick, means for supporting a vertical traverse frame on the derrick, power means operatively connected to the frame, rotary drive power means supported by frame for vertical movement, a rotary drill bit adapted to rotate about vertical axis, means connecting the drill bit to rotary drive power means.

52463. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the preparation of di-substituted pyrrolidones. By reduction of β -cyano-pro-

pionic esters carrying in the β : R position two substituents from a group consisting of alkyl, aryl, cycloalkyl and cycloalkenyl radicals.

52464. F. Hoffmann-La Roche & Co. Aktiengesellschaft. A process for preparing morphinane derivatives. By heating (-)-3-hydroxy morphinane with a propergyl halide in an organic solvent in the presence of an acid-binding agent.

52465. Void.

52466. Ciba Limited. Manufacture of non-steroids. An acylating agent is caused to act on a 16:17 α -oxide-20-keto-pregnane compound in the presence of an acid catalyst.

52467. Oesterreichisch-Alpine Montangesellschaft. Process for drying colloidal matter, particularly lignite. Heating raw materials by pressure steam and hot water and then cooling in conjunction with a release of pressure and steam.

52468. Radio Corporation of America. Magnetic record transducer. Comprising signal coil means and high permeability core member therefor of thin ribbon-like form providing closed loop, the core member having polar ends approaching or engaging one with the other in line contact to provide an effective flux gap.

52469. Mira zavody na pletene a stavkove zbozi, narodni podnik. A pump and nozzle system for nozzle operated weaving looms. Comprising a pump with a nozzle for entraining weft wherein the piston is loaded by a spring in the direction of the discharge of liquid, the quantity of flow of which are continuously adjustable.

AUGUST 3.

52470. A. Hufschmid. Adjustable spanners. The lever which serves for the mutual displacement of the sleeve and support, is subjected to the self clamping action in each position by a sliding block of crescent shaped or semicircular cross section.

52471. Babcock and Wilcox Limited. Improvements in vapour and liquid separating means for forced flow, once through, tubulous vapour generators. Centrifugal separators are arranged to extent adjacent to one another with upright axes downwardly from a collector.

52472. Weaving Research & Textile Commission Agents Limited. Improvements relating to looms for weaving. (August 14, 1953.) Two weft yarns are carried into the shed from opposite sides by reciprocated spears which follow each other closely across the warp shed.

52473. E. Willetts and E. G. Willetts. A new or improved blind. (August 10, 1953.) Comprising spaced rigid frames, pivotally mounted series of spaced rigid coupled arms thereon having series of transversely curved slats adapted to move therewith.

52474. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of xanthine derivatives. Metallic salt of a 1, 3-di-lower alkyl xanthine is reacted with a halogenated propane derivative of the formula R-Hal., R being an allyl group or acetyl precursor group.

52475. Etablissement Tresa. Method of producing a filing tool. (May 11, 1954.) Comprising a thin metal lamina having a series of elongated unsharpened teeth raised by stamping to an angle sufficient to open at the forward face of each tooth.

52476. Societe De Prospection Electrique Procudes Schlumberger. Apparatus for determining the deviation of a bore hole from the vertical axis. A device comprising a compass preferably a small magnetic bar floating in a vessel in a gimbal mounting, the device being subjected to weak percussions.

AUGUST 4.

52477. Mrs. Gul Kewalram Doulatram and Mrs. Drupati Khubchand Santani. Advertisement signs for use on fluorescent light tubes or the like. Consisting of a hollow device, U-shaped in cross-section, with a base having advertisement matters, the sides carrying flanges opposite each other and at either end such that when the flanges are slipped on to the light source, the flanges hold the sign firmly on the light source.

52478. Universal Oil Products Company. Process for concentrating hydrogen. Contacting with liquid absorbent in absorber, removing hydrogen-rich gas from absorber, removing enriched absorbent and flash vaporizing absorbed therefrom in high pressure zone and then in low pressure zone.

52479. The Indian Oxygen & Acetylene Company Limited. Improvements in or

relating to fluid actuated valves. (August 5, 1953.) Comprising an inlet chamber, an outlet chamber having vent for the discharge of compressed fluid, a movable element separating the inlet chamber from outlet chamber and adapted to close the vent, and a uni-directional valve mounted on the movable member.

52480. C. W. Pilo. Process for bringing into contact with one another two flowing media, and arrangement for carrying said process into effect. Heavier liquid medium is centrifugally conducted over a rotating surface and higher liquid medium is conducted centripetally over the liquid layers.

52481. Dorman & Smith Limited. Improvements in and relating to the mounting of the movable contacts of electric switches. Movable contacts are mounted on a frame carrier having latches to hold it on actuating members.

52482. Dorman & Smith Limited. Improvements in and relating to connecting devices for electrical conductors. Metal part secured in insulating mounting to which a reversible cover is attached.

52483. Dorman & Smith Limited. Improvements in and relating to electric switches and circuit breakers. Comprises a fixed part secured on an insulating base and movable part pivoted on the fixed part.

52484. Dunlop Rubber Company Limited. Inflatable articles composed of or containing a layer of a rubbery composition. The articles are composed of, or contain a layer of a rubbery copolymer of a diolefine and an unsaturated ketone.

52485. Void.

52486. Societa Italiana "Cordpen." Method and device to straighten and clean cotton, wool, synthetic and similar fibres coming from spinning machines. Providing a funnel having a hole at the bottom through which the fleece is introduced and passed through two rollers and a guide roller.

AUGUST 5.

52487. The Bradford Dyers' Association Limited and Albright & Wilson Limited. New polymeric materials, fibres treated with these materials, and a process for carrying out such treatment. (August 13, 1953.) Reaction product of

tetrakis or tris-hydroxy-methyl phosphonium chloride and nitrogen containing polyfunctional compound capable of reacting with formaldehyde.

52488. Edwin Danks and Company (Oldbury) Limited. Improvements in driving mechanisms. (August 6, 1953.) Speed regulator for rate of driving wheel rendering wheel engaging means of complementary reciprocable means ineffective to hold the wheel over variable portion of movement of complementary means in the driving direction.

52489. Aktiebolaget Statens Skogsindustrier. Motor saw for sawing out so-called tube insulating shells from plates of mineral wool or other blocks of insulating material. Active part of saw blade bent in the form of arc around axis parallel to direction of sawing and having free edges to permit passage of sawn product inside it: saw blade guided both in radial and axial direction and in parted with sawing movement around the axis.

52490. Imperial Chemical Industries Limited. Watersoluble organic nitrogen compounds. The compounds are prepared by heating an N-substituted dicyandiamide and a linear poly-alkyleneimine.

52491. Tecalemit Limited. Improvements in or relating to pressure-fluid actuated motors. (May 31, 1954.) (Addition to No. 50103.) Upper or outer end of bore in which upper or outer end of valve actuating rod is slidably guided, closed and connected via a duct to fluid inlet duct to main piston cylinder.

AUGUST 6.

52492. Void.

52493. Philip Morris and Co. Ltd., Inc. Improvements in or relating to filters and tobacco products employing the same. A tobacco product wherein the mouthpiece filter contains at least 5 per cent. by weight of a polyhydric alcohol.

52494. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to apparatus for flame cutting profiled metal articles. (August 10, 1953.) Comprising a burner support including a post adapted to be rotated about an axis normal to the plane of the surface of work piece to be cut, burner holding means carried by the post, and means for rotating the post.

52495. Estirajes Balmes, S. A. Improvements in drawing mechanisms for textile machines. Consisting of two short cylinders arranged co-axially close to one another, which bear upon the lower roller of the drawing mechanism and revolve by contact with them.

52496. Estirajes Balmes, S. A. Improvement in mechanism for supporting the free-pressure rollers of spinning and preparation machines. The top pressure roller is supported by means of swinging brackets which oscillate about an axis parallel to the free pressure roller and located behind it.

52497. Void.

AUGUST 7.

52498. Void.

52499. V. J. Page. Improved fluid power units and machines incorporating such units. Longitudinally spaced main and auxiliary ports, and ported valve member between valve chamber inlet and piston chamber, main ports serving alternately for supplying and exhausting piston chamber and auxiliary ports serving alternately for supplying and exhausting valve chamber; valve member controlled by fluid on resulting piston movements.

AUGUST 9.

52500. Very Rev. Father D. Fernandes and Brother J. Iten. An improved drill chuck. Comprising a cylindrical shell with a conical part at its bottom, in which are housed gripping claws adapted to have a firm grip upon the stem of a drill.

52501. Pending.

52502. Sarashi Charan Bhaumik. An automatic train-protecting and controlling system. Current of predetermined value circulating between a generator, electro-magnetic relays of train apparatus locks signals of a track section when it is clear; deviation in value of current operates additional relays for applying brakes and cutting off power supply.

52503. PERFOGIT Societa per Azioni. Apparatus for the continuous condensation of amino acids. The apparatus, wherein the mass to be polymerised, subdivided into layers, passes over heating members is characterised in that heating pipes are employed as sources of heat supply.

52504. Imperial Chemical Industries Limited. Improvements in or relating to the production of the gamma isomer of benzene hexachloride. (August 14, 1953.) Comprises treating mixture of alpha and gamma isomers with dimethyl carbonate to dissolve all alpha and part of gamma isomer only and isolating the gamma isomer from undissolved remains.

52505. W. Strikfeldt & Co. Improvements in hot blast cupola installations. Comprising a heating chamber into which hot gases are led and the latent heat contained in hot gases is released for heating air or water for generating steam.

52506. T. Yoshida. Process for the electrodeposition of ironchromium alloy. Electrolytic bath has divalent iron, trivalent chromium, urea and sulphate radical.

52507. Westinghouse Air Brake Company. Fluid pressure brake apparatus. With a choke means interposed between brakepipe and one communication for controlling flow of fluid under pressure from brake pipe to auxiliary reservoir.

52508. Void.

52509. Ciba Limited. New monoazo-dyestuffs and process of making same. Aminonaphthalene sulfonic acid is coupled in an acid medium with a diazo-compound of an amine.

52510. Ciba Limited. Method of hardening polyepoxide compounds. A mixture of polycarboxylic anhydrides is used at least one of which is a high melting polycarboxylic anhydride.

AUGUST 11.

52511. Radio Corporation of America. Television pick-up tubes. Of the type in which electrons are accelerated toward a target which reflects varying portions of the electrons, the target being arranged to scatter electrons which are collected for output signal.

52512. Void.

52513. Babcock & Wilcox Limited. Improvements relating to mechanical stokers. (August 12, 1953.) Having furnace chamber walls lined by pendent cooling tubes and sealing means at the side of stoker grate including a sealing strip extending alongside a side wall header means.

52514. The M-O Valve Company Limited. Improvements in or relating to

electric travelling wave amplifiers. (August 14, 1953.) Having means for causing electron stream to flow adjacent to the helix of conducting material, formed as a multi-start helix comprising plurality of similar coaxial helices with interleaved turns, all helices being electrically symmetrically associated with input and output means.

52515. British Insulated Callender's Cables Limited. Improvements in the application of sheaths to electric cables. (September 23, 1953.) Drawing a cable body by a tow line into an over-size tube laid straight and reducing the diameter of the tube to elongate it.

52516. Dipag Limited. Apparatus for aiming weapons for combatting mobile targets, in particular aircraft. Adjusting aiming-off valves automatically in correspondence with a rectilinear target flight path through the aiming weapon range.

52517. British Reinforced Concrete Engineering Company Limited. Improvements in or relating to reinforcement for reinforced structures. (August 12, 1953.) Stress carrying members of reinforcement formed with bond improving formations such as indentations having a transverse character.

52518. Pest Control Limited. A device for use in introducing a predetermined quantity of a systemic insecticide beneath the surface of the soil. (September 1, 1953.) [Addition to No. 49737.] Comprising a shaft provided at one end with a head consisting of an insecticide coated with a petroleum, vegetable or insect wax.

52519. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of xanthine derivatives. Reacting 1, 3-dilower-alkyl-xanthine with halogenated propane derivative in presence of a tertiary base.

52520. Lovens Kemiske Fabrik ved A. Kongsted. A method for the production of mono- or di-esters of penicillin. By reacting a phenol or thiophenol with an anhydride of penicillin with a carboxylic acid.

52521. Void.

52522. Unilever Limited. Improvements in or relating to the extrusion of protein solutions into a coagulating bath. (August 18, 1953.) An alkaline substance is fed continuously into a stream of an aqueous solution or suspension of the protein and the resulting stream is

extruded through an extrusion device with an hour.

AUGUST 12.

52523. Void.

52524. Shri Dhar. Method of and means for manufacturing pressed beads of glass. Moulding the beads in two mould parts with multiple cavities, said cavities having pins therein.

52525. Shri Dhar. Device for the manufacture of ornamental pieces of glass. Consists of a female mould with engravings and a slidable male mould with projections or embossings the arrangement is such that the projection partly enters into the engravings when the male mould is lowered to contact the female mould after deposition of glass.

52526. Shri Dhar. Method or process for the manufacture of aventurine glass. Glass composition is subjected to slow cooling and their subjected to annealing at gradually reducing temperature.

52527. A. M. Latorre. Improvements in electric generators. Comprises a rotor of antimagnetic or paramagnetic material with openings inside a stationary shell, inner stator also provided with fields.

52528. J. R. Geigy A.-G. Process for the production of new pyrazolone derivatives. Condensing reactive derivative of a cyclopropane carbonyl acetic acid with an aryl hydrazine.

52529. Void.

52530. R. Herzog. Constructive element for the spatial connection of corners especially for glass show-cases. Pyramid-shaped cups are connected in a dismountable way by means between which simultaneously at least three plates are fitted without being weakened by boring slots.

52531. The General Electric Company Limited. Improvements in or relating to contact wiper assemblies for electromagnetic step-by-step switches. August 19, 1953.) Comprises two spaced wiper blades each blade containing three portions.

52532. H. J. Longley. Mechanism for the central control and operation of louvres or the like. Louvres being provided on their axis of rotation with a circular member, like a wheel, adapted to be rotated from within building.

52533. Brookhirst Switchgear Limited. Improvements in or relating to electric

contactors. (August 13, 1953.) Comprises a core or a fixed part to be inserted through a coil, a U-shaped armature engaging the pole faces.

52534. Ciba Limited. Process for the synthesis of steroids. A 2 α -acetyl-4 β -oxy-polyhydrophenanthrene-1-one containing a bridge consisting of two carbon atoms and connecting the 2-carbon atom with the 4 β -oxy group is cyclicized.

52535. Westinghouse Air Brake Company. Fluid pressure brake apparatus. Two chokes and a check valve included in the reservoir charging and overcharge dissipating communication.

52536. Westinghouse Air Brake Company. Fluid pressure brake apparatus. With means responsive to pressure of fluid in the control reservoir to close second charging communication whenever and so long as the pressure in the control reservoir exceeds a certain value.

AUGUST 13.

52537. Bankim Chatterji. An advertising machine. [Addition to No. 50954.] Wherein means for operating the lever comprise an electric motor which through worm wheel arrangement, and a lay shaft drives the main shaft to which the connecting rod is eccentrically connected.

52538. D. C. B. Limited. Improvements in and relating to writing instruments of the ball tip type. (August 13, 1953.) Having a die-cast nib carcass of tin alloy with a ball housing with inverted conical walling, an ink feed duct and an ink supply passage.

52539. Rud. Furrer Sohne AG. Filing means suspendable in hanging files with lateral reference elements. The carrying top portion of the filing means is equipped with at least two recesses of different configuration adapted to engage front and rear supporting rail.

52540. Imperial Chemical Industries Limited. A process relating to the bleaching of cellulosic goods. (August 19, 1953.) [Addition to No. 50967.] Goods from second stage of parent patent are further passed through peroxide compound bath having alkalinity less than 7.2 grams per litre of NaOH and average pH from 9.5 to 11.

52541. S.I.S. Societe d'Investissements Collectifs. Device and process for

working and plasticizing plastic material. The device comprises a screw having thread means of constant outside diameter, the shaft of the screw having an enlarged root diameter at the centre and the screw being housed in cylindrical chamber.

52542. E. K. Cole Limited. Improvements in or relating to tuning arrangements for radio receivers. (August 28, 1953.) Rotary shaft of variable condenser so connected that when it approaches the condenser's maximum position, further rotation causes the capacitance to continue to increase up to said maximum and to simultaneously increase the inductance of an associated tuning coil.

AUGUST 14.

52543. British Telecommunications Research Limited. Improvements in or relating to electrical signalling systems. (August 31, 1953.) In which carrier system is normally operated from two independent and nominally identical carrier supply equipments simultaneously.

AUGUST 16.

52544. P. D. S. Young and D. A. Leader. Bonding of fabric. (August 17, 1953.) Fabric previously impregnated with solid thermosetting polyester resin, is wetted with polymerisable monomer containing the grouping $\text{CH}_2=\text{C}$ and is kept in contact with other surface.

52545. The National Smelting Company Limited. Improvements in or relating to smelting metalliferous materials containing lead and zinc in a blast furnace. Metalliferous material treated to reduce the sulphur content of the charge to be fed to the furnace below 1.5 per cent.

52546. Union Carbide and Carbon Corporation. Automatic electric arc-stitch welding. (June 8, 1954.) Arc supplied with welding current sufficient to produce an electrode melting rate greater than the feeding rate so that the end portion of the electrode is fused to form a weld deposit while the arc.

52547. United States Steel Corporation. Mechanism and method for classifying and assorting metal sheets. Including a deflector, means for detecting imperfections, means operatively connected to the detecting means and a shear for

establishing the trailing edges of imperfect sheets as reference points for subsequent operation of the deflector, means for transferring these reference points for operating the deflector to the leading edges of said sheets and time delay means connected to deflector and transferring means.

52548. Void.

52549. Aerocem Limited. Improvements in or relating to the filling of gaps and fissures in soils and other structures. Flowing into voids a potentially solid liquid binding medium containing air or other gas finely dispersed therein.

52550. The Wellcome Foundation Limited. Improvements in and relating to the preparation of aminophenoxy alkanes. (August 28, 1953.) Bis-4-aminophenoxy alkanes and their substitution derivatives are prepared by known methods starting from 4,4'-disubstituted phenoxy alkanes containing substituents such as nitro group in the nucleus.

52551. F. Hoffmann-LLa Roche & Co. Aktiengesellschaft. Process for the manufacture of novel xanthine bases and of salts thereof. By reacting xanthine compounds with formaldehyde and a primary or secondary organic base or its salts.

52552. Toyo Koatsu Industries Incorporated. Process for the recovery and reutilization of unreacted ammonia and carbon dioxide in urea synthesis. The urea solution is withdrawn from the autoclave, its pressure reduced thus vapourising the unreacted excess ammonia, the urea solution freed of NH_3 is fractionated into NH_3 and CO_2 , carbon dioxide being separated by absorption in amine or alkaline carbonate solution, the separated NH_3 and CO_2 being reutilised for urea synthesis.

52553. G. A. M. Petersen. Pilot bit for earth boring tools. Comprising a cone shaped body formed integrally with a pair of blades and extending radially, the blade having a concave-convex cross-section radially from the longitudinal axis of the bit.

52554. Mavor & Coulson Limited. Improvements relating to endless belt conveyors. Comprising a driving gear and an assembly of pulleys, an automatic motion multiplying gear, a manually controlled take-up gear and an additional pulley.

52555. Farbwerke Hoechst, Aktiengesellschaft vormals Meister Lucius & Bruning. Basically substituted carboxylic acid amides and a process of preparing them. (August 15, 1953.) Acylating 1-aminobenzene containing in 2-position a halogen atom and in 6-position an alkyl radical, with aliphatic amino carboxylic acid.

52556. Schlumberger Well Surveying Corporation. Apparatus for investigating material exposed to a unidirectional field. Means for producing paramagnetic resonance in atoms having portions embodying paramagnetic properties and exposed to unidirectional field and means for obtaining indications of said paramagnetic resonance.

AUGUST 17.

52557. Imperial Chemical Industries Limited. Manufacture of Glycol esters of terephthalic acid. (August 31, 1953.) [Addition to No. 39499.] Reacting terephthalic acid and ethylene oxide in an aqueous medium in the presence of a terephthalate to form bis (beta-hydroxyethyl) terephthalate.

52558. Heinrich Koppers G.m.b.H. Improvements in or relating to the quenching of coke. (July 21, 1954.) Comprising a battery of inclined cooling chambers subdivided into individual compartments having an inner shell, and a wall permeable to cooling gas.

52559. Executors of James Mills Limited. Improvements in or relating to fastenings for securing railway rails to sleepers. Tapered key engaging on one side with upper side and outer edge of rail flange and with one face on inner side of U or C shaped resilient metal clip one limb of which inserted through hole in sleeper or base plate engages same; interchangeable faces of key and clip jaw are disposed in common plane permitting disposition of key in different positions along jaw.

52560. Metropolitan-Vickers Electrical Company Limited. Improvements relating to noise reduction in gear-wheel assemblies. (August 26, 1953.) Each gear wheel connected with the journal or journals of its shaft through resilient coupling means and provided with means to correctly space there.

52561. Standard Telephones and Cables Limited. Improvements in or relating to switching circuits employing static electrical elements. (August 18, 1953.) Comprises a symmetrical static element

having a first electrode and two second electrodes and a connection to the control point.

52562. Societe D'Exploitation Des Brevets Moineau. Improvements in elastic coupling devices. (July 27, 1954.) Screw threaded hole in a resilient member receive screw threaded elements coupled to the shafts.

52563. Societe D'Exploitation Des Brevets Moineau. Improvements in methods and machines for machining helicoid-shaped pieces. (July 27, 1954.) Tool rotated about an axis parallel to and off-set from the axis of rotation of the workpiece while tool and workpiece are moved relatively lengthwise.

52564. The Birmingham Small Arms Company Limited. Improvements in or relating to electric generators. Comprises stationary magnet, rotating coil, coil support, leads.

AUGUST 18.

52565. Rud. Furrer Sohne AG. Rack consisting of bent girders. Each rack side consists of bent girder, two of the sides forming U shaped frame and two other rack sides forming the shape of inverted U.

52566. Motha Treuinstitut. Improvements in or relating to electric ignition devices for projectiles. Consisting of a condenser, an electric generator for charging said condenser before percussion.

52567. International Business Machines Corporation. Digital electrical computer. (May 6, 1954.) Includes first and second paths comprising delay means comparing means and control means.

52568. Imperial Chemical Industries Limited. New azo dyestuffs. Diazotising an amine and coupling the diazo compound with a coupling component.

52569. Imperial Chemical Industries Limited. Improvements in or relating to the conversion of thermoplastic polymeric materials to a granular form (September 1, 1953.) Extruding the material in the molten state in the form of a thread or rod, into a cooling liquid and cutting the thread while immersed.

52570. Stamicarbon N. V. Apparatus for and process of concentrating or classifying particles suspended in a liquid. A hydrocyclone has a discharge aperture and by suitable means fluctuation in discharging fractions are restricted.

52571. S. A. D. U. B. Societe Holding de Valeurs, Brevets ou Proprieties. Slide fasteners. Where in at least one of the interlocking element consists of two intertwined wires each complete or helical winding of said one element having a length corresponding to three half turns of two intertwined wires.

52572. D. Joshi. Improvements in or relating to meat safes and the like. Vertical edges are bent to interlock with each other and form vertical openings through which securing bolts pass.

AUGUST 19.

52573. H. G. Heblikar. Canarese typewriter. Of the total four rows of key buttons in the keyboard, the key buttons in the last two rows and the last key in the second row, are dead keys.

52574. "Shell" Research Limited. Process for the manufacture or blending of lubricating oils. By adjusting one or more condition of the process of manufacture of blending to keep value of parameter of the work of adhesion of the oil produced on solid surface within predetermined desired limits.

52575. Stamicarbon N. V. Apparatus for automatically measuring the specific radiation absorption capacity per unit of mass of solid substances, and process for the physical or chemical treatment of a product such as coal. Having a movable member with a groove in which sample solid substance is spread out, means for moving it so that the groove passes lengthwise through the ray-beam at uniform velocity, which is compared photo-electrically with a second ray-beam, means for spreading the sample in the groove and means by which compensating action of compensating organ can be converted into an impulse for operating a signalling, indicating, recording or controlling device.

52576. Goodyear Aircraft Corporation. Improvements in laminated panel. Comprising two stress transmitting face sheets and a balsa wood core inserted there between, the core having indentation on two surfaces and being bonded to sheets by adhesive.

52577. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to X-ray apparatus for producing direct visible fluorescent images of body sections with the use of image amplification. Luminoscope moving in a rectilinear or circular path is connected by a

viewing tube system, which is movable and telescoping to an ocular the direction of viewing of which is independent of the movement of the luminoscope and adjustable independently of this movement.

52578. Boots Pure Drug Company Limited. New acaricidal compositions. (August 20, 1953.) Comprises a compound of the general formula R_2S_2 together with a diluent or carrier.

52579. Boots Pure Drug Company Limited. New compositions comprising sulphur containing compounds. (August 20, 1953.) Comprises a compound of the formula R-S-S-R (where R is a benzyl or phenyl radical) together with a diluent or carrier.

AUGUST 20.

52580. Director, Indian Agricultural Research Institute, New Delhi. Improvements in or relating to preparation of terpene thiocyanates for use as insecticides. Comprising reacting terpene chloro-esters with an alkali thiocyanate dissolved in a lower alcohol or ketone at 55—80°C.

52581. M. N. Javeri. A pencil sharpening machine. Comprising an opening in a body, an aperture in the wall of the opening and a pivoted blade so arranged that when its handle is moved up it sharpens exposed end of pencil.

52582. Mrs. Madhuri Mahalanabis. An educational device. Comprises a base plate and a top plate fixed on the base plate with complementary fretwork configurations representing alphabets.

52583. N. V. De Bataafsche Petroleum Maatschappij. Preparations for combating noxious organisms. Comprises a biocidal ingredient in admixture with a non-solvent carrier and/or a surface active agent.

52584. Mitchell Engineering Limited. Improvements in or relating to steam separators for use in boiler drums. (September 29, 1953.) Steam and water are separated by gravitational fall on a number of vertical channels.

52585. Metropolitan-Vickers Electrical Company Limited. Improvements relating to reduction of vibration transmission from machines and apparatus. (September 14, 1953.) Two or more

parts constrained for movement relatively to one another by bearing surfaces between them, resilient means to perform functions of supporting and coupling the rotating parts, and a casing at least partly surrounding all those parts.

52586. J. T. Fallon. Improvements in and relating to a method and apparatus for heating air or/and gas. (August 21, 1953.) The hot gases on entry into exchanger are diluted out.

52587. J. Steinicke. Storage device for receptacles such as sheives, filing cabinets, racks and the like. Characterised in that at least two rows of receptacle units are disposed in side by side arrangement movable both longitudinally and transversely therein and one unit space left free in each row.

AUGUST 23.

52588. Shri Ram and The Delhi Cloth & General Mills Co. Ltd. Improvements in or relating to the cradle and spindle assembly of cone winding machines of the schlafhorst type. Consisting of a tube revolving on ferrules fixed on the cradle sides one side of which consists of a flat spring acting as a bearing for the spindle tube.

52589. Void.

52590. Monsanto Chemicals Limited. Improvements relating to plastic materials. (August 25, 1953.) Containing polystyrene and polyvinyl acetate having intrinsic viscosity between 0.7-1.25 and 0.2-2.0 measured in toluene and ethyl acetate respectively.

52591. Ruston-Bucyrus, Ltd. Improvements in or relating to hydraulic feed for an hydraulic cable-tool drill. Back pressure in a fluid circuit due to drill bit not bottoming hydraulically releases brake of winch drum momentarily feeding out cable in proportion to back pressure.

52592. Harry Ferguson Inc. Improvements relating to drive mechanisms for implements side-mounted on tractors. Drive shaft adapted for connection to the outboard implement wheel and extending inboard towards the tractor and driven from adjacent rear axle.

52593. Resilla Cots and Rollers Limited. Improvements relating to aprons for textile machines. (September 4, 1953.)

Surrounding a tube composed of rubber or rubber-like polymer covered by a tubularly woven fabric and mounted on a mandrel, with an outer layer of rubber or rubber-like polymer.

52594. Mentmore Manufacturing Co. Limited. Improvements in or relating to clip means. (August 24, 1953.) Wherein a pair of wings each carrying a leg is formed on the retaining arm's end, arranged to extend through the wall of a tubular member and held therein by a further tubular member close fit therein.

52595. F. S. Lapeyre, J. M. Lapeyre, E. M. Lapeyre, A. C. Lapeyre, F. H. Lapeyre and F. E. Riess. Improvements in or relating to shrimp deveining machines. Comprising an inclined trough, a water supply to said trough, and knives carried by said trough extending partially diagonally.

52596. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of novel xanthine derivatives. By reacting 1, 3-dialkyl-xanthines with acrylonitrile in the presence of basic catalysts at a temperature 100—150°C and, if desired, hydrogenating the product obtained.

52597. J. L. W. Ellis. A preparation for the cleaning of metal surfaces. (August 24, 1953.) Comprising a colloidal clay, hydrochloric acids phosphoric acid, a wetting agent and a reducing agent.

52598. Ciba Limited. Quaternary N-(substituted aminoalkyl)-tetra chloroisindolines and process of making same. An unquaternated isoindoline is treated with a quaternating agent to introduce an alkyl radical having 1-5 C-atoms.

52599. Ciba Limited. New diazoamino-compounds and process for making them. 1-amino-benzene-2-carboxylic acid-4-sulfonic acid is condensed with a diazo-compound of an amine.

52600. Ciba Limited. New diazoamino-compounds and process for making them. Condensing a dicarboxylic acid with a diazo compound suitable for the production of ice colors.

52601. Ciba Limited. Process for the manufacture of diazoamino-compounds in dry form. A solvent-containing mixture which contains in addition to a diazoamino-compound a free diazo-

compound and a free amine is subject to rapid drying.

52602. Void.

AUGUST 24.

52603. J. R. Geigy A.-G. Compositions for influencing the growth of plants. O-aryl carbamates with a carrier.

52604. Tyre Equipment and Reconditioning Company Limited. Apparatus for moulding or remoulding pneumatic tyre covers. (December 17, 1953.) Comprising a pair of complementary annular side plates each having a moulding surface, cooperating with tread rings of different diameters and heating means associated with outer periphery of the ring.

52605. Boots Pure Drug Company Limited. New acaricidal compositions. Comprising toluene-alpha-sulphonylchloride and diluent or carrier.

52606. Cilag Limited. New chemotherapeutically active salts. (February 4, 1954.) Reacting $\text{NH}_2\text{-C}_6\text{H}_4\text{-SO}_2\text{-CH}_2\text{-NH(alkyl)-COOH}$ with an organic base.

52607. A. L. L. Baker. Improvements in and relating to jetties, wharves and like berthing places for vessels. (September 22, 1953.) Fenders extending rearwardly from vessel-contacting surface and suspended at three positions only, each position being vertically below a part of berthing place decking.

52608. K. Gronn. Improvements in clamps or spikes for fastening of a rail to a support. Pair of legs interconnected to transverse portion by upwards arcuate portions extending laterally and in same direction.

52609. Hoganas-Billesholms Aktiebolag. Method and apparatus for the manufacture of mineral fibres in particular glass fibres to form self-sustaining units. (May 31, 1954.) By contacting the binder bearing stream with the fibres substantially in the same direction as the gaseous blast for loosening and carrying away said fibres.

AUGUST 25.

52610. Asahi Garasu Kabushiki Kaisha. An apparatus for automatically cutting glass sheet. A conveyor being forwarded on which the glass sheet is loaded, a guide frame bridged across above said

conveyor, a slide bed so mounted on the frame over said conveyor as to be capable of sliding forwards and backwards thereon.

52611. Asahi Garasu Kabushiki Kaisha. A stop device in an automatic glass cutting apparatus for cross cutting. In which on the surfaces of slide rests is mounted across a conveyor at right angles thereto a guide frame which is formed in a rectangular shape by connecting front and rear guide rails.

52612. Asahi Garasu Kabushiki Kaisha. An apparatus for automatically loading and positioning glass sheets upon the endless conveyor of a glass cutting installation. A semicircular glass loading end portion of the conveyor is formed between the last member of circumferential movement and the first member of straight line movement.

52613. Asahi Garasu Kabushiki Kaisha. An automatic packing apparatus for glass sheets. Wherein when the glass sheets piled up in unit quantities on a glass conveyor are forwarded automatically a holding frame with a crate therein is adapted to take the feed of the glass sheets.

52614. Asahi Garasu Kabushiki Kaisha. An apparatus for automatically scoring glass sheet and subsequently cracking off the scored glass sheet. A stationary scoring table for placing the glass sheet to be cut off thereon, a frame of guide rails for running of beds and secured in pairs with definite spacing on one same plane then one rack bars.

52615. Void.

52616. Dr. Ing. S. B. Malvica. Improvements in or relating to a magnetic flux varying device. Formed by a cap of ferrous material wound with at least one coil of wire through which is passed an electric current.

52617. Organon Laboratories Limited. Improvements in preparations for the treatment of the human skin. Comprising a vehicle containing a steroid compound which is a derivative of Δ^5 -androst-3 β -ol or of Δ^4 androst-3-one or of androst-3 β -ol or of androst-3 one excluding testosterone and its esters and methyl testosterone.

52618. Schnellpressenfabrik Aktiengesellschaft Heidelberg. Improvements in or relating to the pre-registering of type matter, blocks or plates and the like for flat and round printing formes. Co-operating locating means preferably

mutually interengagable means such as fitting holes, fitting pins, fitting surfaces stops, keys, grooves, directly or indirectly arranged on transparent material on the one hand and on the chase, type bed, closing steps or circular forms cylinder on the other hand.

AUGUST 26.

52619. C. D. Parikh and B. V. Raval. Improvements in methods relating to the manufacture of cuprous chloride. Reacting sulphuric acid, sodium chloride and copper in oxygen yielding form or with an oxidising agent.

52620. Void.

52621. Void.

52622. Canadian Airborne Geophysics Limited. Apparatus for electromagnetic detection of ores and conductive bodies and formations. In which imaginary disturbances created by the masses of metal situated near the transmitting coil, interfering with the precise measurement of the imaginary and phase difference anomalies caused by ores, may be eliminated by means of a compensating auxiliary coil.

52623. Imperial Chemical Industries Limited. Electric igniters. (October 30, 1953.) Comprises a tubular casing of ductile material containing a plastic charge and an electric fuse.

52624. Ciba Limited. Pharmaceutical preparations containing new pyridazines. [Divided out of No. 49545; antedated May 12, 1953.] Comprising 4-cyano-pyridazone-(3)-compound and a pharmaceutical carrier.

52625. The British Bata Shoe Company Limited. Improvements in the manufacture of shoes and like articles of footwear. Comprising an insole and an upper stitched together, an intersole of deformable sheet material and outsole of vulcanised rubber.

52626. Maschinenfabrik Augsburg-Nürnberg A.G. Improvements in and relating to forced circulation lubrication for the pistons of piston engines. Lubricating oil injected into interior piston and emerging through apertures in groove for scraper ring flow down through wide deep grooves or channels extending down to lower end of piston skirt.

52628. Maschinenfabrik Augsburg-Nürnberg A.G. Improvements in and relating to injection nozzles for internal combustion engines. Heat conducting

part formed as conical sealing body slipped on nozzle stem before insertion into cylinder head with nozzle in position the body fits singly on nozzle stem and conical bore in cylinder head.

52628. Maschinenfabrik Augsburg-Nürnberg A.G. Weir with sluice gates. Each gate automatically locked by sliding shoe on top of support strut slidable in a guide on gate; shoe pivoted to free end of pivoted bell crank lever, other end of which bears against preceding gate or a lever of release linkage in masonry.

52629. Maschinenfabrik Augsburg-Nürnberg A.G. Grating for water conduits. Grating anchored by chains, link rods or like to conduit or arranged to pivot about its bottom end, held floating in working position by one or more buoyant bodies.

52630. General Railway Signal Company. Improvements relating to coded track signalling systems for railways. In which a higher pulse rate is transmitted when a stretch of track is unoccupied than that transmitted when the stretch is occupied.

AUGUST 27.

52631. Council of Scientific and Industrial Research. A process for the electrolytic preparation of salicylaldehyde. Electrolytic reduction of salicylic acid, boric acid and sodium sulphate or chloride at a pH 5.4 to 7.

52632. P. C. Mistry. Apparatus for maintaining constant flow of water in pipeline or the like connection. Including two telescopically engaged tubes flanged at one end and placed inside the pipe through which liquid flow is to be maintained constant, one of the tube being provided with longitudinal slits of which lengths of portions open to flow of liquid are automatically adjusted according to the pressure of the liquid in the supply pipe.

52633. Wingfoot Corporation. Improvements in valve assembly for tire rim. Includes a tubular stem having a portion of a size to pass through the rim opening, a second portion and an elastic deformable member on the second portion for insertion in the rim opening.

52634. Wingfoot Corporation. Improvements in rim and method of making it. Having an endless annular band, a rolled edge forming a bead retaining

flange joined to the outer periphery of the radially outwardly extending portion.

52635. The English Electric Company Limited. Improvements relating to actuating mechanisms such as for a mechanical brake of an electric mine winder. (September 1, 1953.) In one position of change over member the first control means is locked and the second control means is effective to control the control device.

52636. The English Electric Company Limited. Mechanism for coupling an actuating member to a transversely spaced axially movable member. (September 1, 1953.) Lockable transverse coupling means connects actuating members to a transversely spaced axially movable member and a separate coupling control means.

52637. R. D. Boyce. Improvements in or relating to adhesive rapair patches. (August 28, 1953.) Having the front face coated with a first adhesive and protected by a first layer of sheet material, and its rear face protected by a second layer secured thereto by second and third adhesive disposed side by side by second layer.

52638. A. Poole and C. L. M. Brown. Lignocaine hydrochloride monohydrate and process of preparing the same. (August 28, 1953.) Combining lignocaine hydrochloride with water to form monohydrate.

AUGUST 28.

52639. Gresham & Craven Limited. Improvements relating to vacuum brake apparatus for railway and like vehicles. (October 15, 1953.) Exhauster produces vacuum in the exhaustion pipe communicating through an automatic isolating valve with a vacuum relief valve and with vacuum side of the brake piston on the locomotive.

AUGUST 30.

52640. Void.

52641. British Filters Limited. Improvements in and relating to filters and filtering elements. Provided on the surface of the filtering sheets self supporting drainage ways or channels.

52642. The General Electric Company Limited. Apparatus for applying colour to flexible continuous bodies of appreciable length. Comprising a plurality of chambers for dye having

annular applicators, with means for causing a part of the body to rotate about parallel to the axis of the applicators.

52643. R. W. Taccone. Machine for making a mold. Comprising a mould box on a support, a head having a wall forming an open cavity, flexible obtuder secured to the head forming a closed-chamber in the head cavity and movable therein prior to molding.

52644. The Visking Corporation. A new or improved polyethylene film and method of making the same. Consisting of polyethylene of density 0.91 to 0.925 and a homopolymer of ethylene of density at least 0.94.

52645. A. K. Ozai-Durrani. Improvements in or relating to quick cooking rice and process therefor. [Addition to No. 44591]. The rice grain subjected to mechanical compression after gelatinizing the exterior portion in a completely pliable state and the interior portion from partial pliability to completely pliable state.

52646. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to gas-fractionating devices. The separated low boiling fraction is condensed and by means of a vapour bubble pump effect the condensate is supplied to the column.

52647. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to luminescent screens and electric discharge lamps comprising such screens. Luminescent material contains magnesium lithium arsenate activated by manganese.

52648. Void.

52649. The British Drug Houses Limited. The manufacture of insulin preparations. (September 8, 1953.) An aqueous insulin solution having a pH of between 2 and 4, comprises insulin and a synthetic basic polypeptide consisting of a chain of aminoacid units and containing not less than 8 aminoacid units per molecule.

52650. Telephone Manufacturing Company Limited. Improvements in and relating to electromagnetic devices such as electromagnetic switches. (August 24, 1953.) Comprises a support member, a plurality of operating magnets on the support and armature for each magnet.

52651. Sylvania Electric Products Inc. Improvements in or relating to photo-

graphic flashlight attachment for cameras. Comprising magazine for holding flash bulbs and means for feeding the flash bulbs one at a time from the magazine to a holder by a manually operated mechanism.

52652. Shri Dhar. Process for the manufacture of cadmium sulphide. Oxidising cadmium by means of a nitrate, dissolving the oxide in acid and adding hydrogen sulphide or sodium sulphide to the solution.

AUGUST 31.

52653. Void.

52654. E. Martin, P. S. Pedersen and P. S. Pedersen, Jr. Improvements in or relating to prefabricated structural member. Comprising a sheet curved in an arc having at least two longitudinal sinuous corrugations and an intermediate corrugation having a number of continuously continuous transverse corrugations the ratio of their width to depth being 5:1 or more.

52655. Morgan Fairest Limited and S. E. Banks. Improvements in or relating to labelling machines. (September 16, 1953.) Comprises a multisided pick-up box with vertically apertured sides, means to rotate the box intermittently and a rotatable transfer member.

52656. Ciba Limited. Cobaltiferous azodyestuffs and process for their manufacture. An agent providing cobalt is reacted upon a mixture of an o-hydroxy-ó-amino-monoazo dyestuff and an o:ó-dihydroxy-monoazo dyestuff.

SEPTEMBER 1.

52657. Council of Scientific and Industrial research. Preparation of synthetic tanning materials from gas tar. Sulphonating gas tar, decolourising resulting soluble gas tar sulphonate with aluminium or zinc and adjusting de-coloured product to a final pH of 3 to 4.

52658. Dunlop Rubber Company Limited. Upholstery covering material. Sheet of plastic resinous material has interconnected cells forming air passages through the sheet.

52659. Dunlop Rubber Company Limited. Inflatable rubber articles. The article has at least on one surface an adherent layer of a reaction product of polyester and polyisocyanate.

52660. N. V. De Bataafsche Petroleum Maatschappij. Water-in-oil emulsions

SEPTEMBER 2.

- containing a salt in the aqueous phase. Lubricating internal combustion engines run with sulphur contained fuels with water-in-oil emulsions, the oil phase of which has the viscosity of a lubricating oil and the aqueous phase contains at least 0.05 mol per litre of a salt of lithium or divalent metal.
52661. Allen West and Company Limited. Improvements in or relating to the control of polyphase alternating current motors. (September 3, 1953.) Of the kind in which dynamic braking is obtained by injecting direct current into the motor primary circuit and wherein the resistance in the secondary is adapted to be varied for varying the speed.
52662. Ruston-Bucyrus. Ltd. Improvements in or relating to an automatically self-synchronizing spudding-mechanism for cable-tool, drills. Hydraulically operated automatically self-synchronizing spudding-mechanism for cable tool drills.
52663. J. Martin. Improvements in and relating to ejection seats for aircraft. (September 4, 1953.) Spring loaded plunger in the seat structure which is normally in engagement with a movable part of the gun and also a fixed part of the gun whereby seat is lock against movement.
52664. J. Martin. Improvements in and relating to ejection seats for aircraft. (September 4, 1953.) Outertube of ejection gun provided with guides for seat frames.
52665. J. Martin. Improvements in and relating to ejection seats for aircraft. (September 4, 1953.) Sliding members on seats run on guides on the main frame and actuated by hand lever through lever and link motions.
52666. M. G. DePenning, (legatee of Vivin Edward DePenning, deceased). Preparation of microbicidal articles. Microbicidal composition comprises a sparingly water-soluble germicidal silver compound and a sparingly water-soluble light stabilizer for the silver compound.
52667. Standard Telephones and Cables Limited. Improvements in or relating to automatic telecommunication systems. (September 2, 1953.) Comprises two sets of three electrode electronic devices capable of providing a low impedance two-way electrical path.
52668. Swan Mills Limited. Device for automatically stopping looms for weaving successive piece lengths. Alternately operating control means to stop the loom once at the beginning of each piece length and then at the end of each piece length being woven.
52669. Westinghouse Brake & Signal Company Limited. Improvements relating to driver's brake control devices for electro-pneumatically controlled fluid pressure braking apparatus. (September 15, 1953.) Electric contacts are spring biased towards their lap position.
52670. Council of Scientific and Industrial Research. Enzyme bates for leather manufacture. Growing the mold in a culture medium containing tapioca flour.

SEPTEMBER 3.

52671. Societe Francais Radio Electrique. Improvements in or relating to transmitters operating with independent side bands. (November 20, 1953.) Distortion preventing means comprises a negative feedback circuit disposed between two stages of the transmitter in which the channel signals have undergone frequency transposition.
52672. Compagnie Generale De elegraphie Sans Fil. Improvements in electromagnetic frequency radar detection systems. (December 7, 1953.) Using travelling wave oscillator whose frequency is varied by varying the velocity of the electron stream of the travelling wave tube.
52673. Compagnie Generale De Telegraphie Sans Fil. Improvements in or relating to automatic frequency-regulation systems for a frequency-shift receiver. (February 16, 1954.) Including a device for controlling the frequency of a local oscillator, the device being controlled by a discriminating circuit the control device having means for periodically sweeping the frequency of the oscillator.
52674. Compagnie Generale De Telegraphie Sans Fil. Frequency-modulated signal discriminator. (March 19, 1954.) Including a mixer circuit adapted to receive both the frequency modulated signal and an a.c. voltage, the beats thus provided being utilised for periodically quenching a super-regenerative

oscillator and means for detecting the r.m.s. output voltage of the said oscillator.

52675. Compagnie Generale De Telegraphie Sans Fil. Improvements in ultra high frequency wave radiating devices. (April 23, 1954.) Comprising a series of co-axial portions, each portion being characterised by the fact that at least one geometrical parameter thereof varies progressively from one end of the portion to the other, passing from a minimum to a maximum then returning to a minimum.

52676. May & Baker Limited Improvements relating to bis-quaternary ammonium salts. (September 3, 1953.) Preparation of bis-quaternary ammonium salts containing cation of the formula $(R_1, R_2, R_3) N^+ A^- N^+ (R_1, R_2, R_3)$ wherein R_1, R_2 and R_3 each is a methyl or ethyl group and A a hydrocarbon chain.

SEPTEMBER 4.

52677. H. V. Fraunhofer and H. E. Coote. Improvements in and relating to colour photographic processes and materials. Developing primary negative material, then applying a take-off material including a metallic sulphide whereby an image is formed of the uppermost image of said negative material, obliterating uppermost image of primary negative and printing from the image in the remaining layer or from layers of said primary material.

SEPTEMBER 6

52678. Void.

52679. Stamicarbon N. V. Method of and apparatus for screening solid particles. The mixture is supplied in a tangential direction to the concave side of a cylindrically screening deck, the mixture travels in a plane perpendicular to the generatrix of the cylindrical surface.

52680. American Cyanamid Company. Improvements relating to the attenuation of rabies virus and the production of rabies vaccine. (July 15, 1954.) By growing virulent rabies virus in successive incubating eggs at least 150 times and until the virus has lost its pathogenicity and then preparing vaccine therefrom.

52681. Imperial Chemical Industries Limited. New azo dyestuffs. (Septem-

ber 9, 1953.) Diazotising an aminophenyl benzthiazole derivative and coupling with a coupling component which is itself capable of forming complex metal compound

52682. A. R. Khan. Improved method of manufacturing tube well strainer pipes. Adjacent pairs of metal strips arranged at predetermined spacing bonded together at intervals to provide slots in between and rigidly secured at upper and lower ends.

52683. Telephone Manufacturing Company Limited. Improvements in a n d relating to telephone system and apparatus including a selective electromagnetic bridge used therein. (September 11, 1953.) Includes contact sets, finger magnets a main operating magnet effecting bed switching.

52684. Y. Sumie. An improved fly comb box in the carding engine. Comprising a comb shaft, an eccentric wheel, a fulcrum lever, a crank arm connecting the said lever and comb shaft.

52685. British Telecommunications Research Limited. Improvements in and relating to electric carrier telegraph systems. (September 11, 1953.) (Addition to No. 42945). Of the type employing frequency shift keying and wherein all the carrier oscillations are generated under the control of a common radio frequency oscillator.

52686. Boots Pure Drug Company Limited. Acaricidal compositions. (March 17, 1952.) [Divided out of No. 49198; ante-dated to March 16, 1953.] Comprising a chlorine substituted benzylphenyl sulphide in admixture with a diluent or carrier.

52687. The Glacier Metal Company Limited. Improvement in or relating to the production of continuous strip material for the manufacture of plain bearings. (September 9, 1953.) Wherein particles of poly-tetra-fluoro-ethylene are pressed into a porous metal strip which is then heated to 327-450°C.

52688. ESCHER WYSS Aktiengesellschaft. Improvements in and relating to multi-stage push-type centrifuging machines. Pusher member and relatively axially displaceable cages arranged overhung on driving shaft.

52689. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a device comprising an X-ray apparatus and an electronic image-intensifying

tube. Between local objective and magnifying lens, there is a slanting mirror and behind the magnifying lens there is another slanting mirror, operative surfaces of mirrors facing one another and the optical axis of the system is in one plane, whilst these mirrors, magnifying lens and the objective being arranged in a housing rotatable relative to the image intensifying tube about the optical axis of the objective.

52690. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to arrangements comprising an X-ray device having an electronic image-amplifying tube. Objective and magnifying glass arranged behind the image-amplifying tube and a transparent screen having light diffusing properties which screen may be removed, being arranged at the area at which an image of the electronically-amplified X-ray image is produced by the objective.

SEPTEMBER 7.

52691. K. Singh. Sleeved metal corner joints for bedsteads. Comprising a metal sleeve having openings in the adjacent side walls and adopted to embrace the upper end of the leg all round.
52692. Atkinson's Agricultural Appliances Limited. Improvements in or relating to endless tracks for self-laying track type vehicles. The pad reinforcements and driving bars keyed together against relative movement in the lateral direction and bolted together in such condition.
52693. Unilever Limited. Improvements in or relating to soap compositions. (September 14, 1953.) Comprising soap, sodium or potassium carbonate disodium or dipotassium orthophosphate and a water soluble non-soapy anionic or non-ionic surface active agent.
52694. Sk. W. Ullah and A. A. Khan. A method or process for the manufacture of hollow glass bangles. Forming a coil of hollow glass tube, separating the rings, bringing it to circular shape with two ends facing each other by applying heat, silvering its inside of each ring and priming the two free ends on a flame.
52695. Aschaffenburg Zellstoffwerke Aktiengesellschaft. Process for the manufacture of pulp. Fibrous material

is impregnated with caustic soda lye and treated in a screwpress after which the material is subjected to milling treatment.

52696. Aschaffenburg Zellstoffwerke Aktiengesellschaft. Process for preparing pulp from sugar cane bagasse for the manufacture of paper. Subjecting bagasse in a hydropulper, removing the pithy substance, and then subjecting the purified bagasse to steam treatment under pressure at 100 to 140°C for at least one hour and then subjecting to usual cooking.

SEPTEMBER 8.

52697. N. V. De Bataafsche Petroleum Maatschappij. Process for preparing a hypochlorite-treated light hydrocarbon oil having a reduced corrosivity towards iron. The hydrocarbon oil, after the hypochlorite treatment is treated with alkali metal mercaptides having an aliphatic or aromatic hydrocarbon radical with at least two carbon atoms.
52698. J. E. Cray, R. E. Shafer and V. Cary. Improvements in or relating to stalk decorticator machine. Comprising a frame structure, a stalk gripping means, a decorticator on said frame structure, a second stalk gripping means and a second decorticator.
52699. The University of Leeds. Improvements in or relating to aminoalkyl phenyl ethers and their salts. (September 21, 1953.) Reacting a substituted phenol or its alkali metal derivative or ester with a dialkylamine halide or secondary amine or tertiary amine.
52700. Ciba Limited. New polyureas and process for making them. (September 9, 1953.) The process consists in treating a compound of the formula $H_2N-R-NH_2$ or $H_2N-(-R-NHCONH-)_m-R-NH_2$ wherein m stands for a whole number and R stands for a phenylene residue or two phenylene residues linked by a bivalent group, with a reactive carbonic acid derivative.
52701. Ciba Limited. Process for the manufacture of new diacyl-hydrazines. (September 9, 1953.) Void after publication. A diacyl hydrazine wherein one acyl group is the radical of a petero-cyclically substituted alkane carboxylic acid and the other is the radical of an isonicotinic acid is made by known methods.

52702. Deering Milliken Research Trust. Filling detecting device for looms. (March 22, 1954.) The grate having an external surface composed of a synthetic polymeric material selected from the group consisting of polytetrafluoroethylene and polytrifluorochloroethylene.

52703. Aschaffenburg Zellstoffwerke Aktiengesellschaft. Process for preparing semipulp from sugarcane bagasse for the manufacture of paper. Bagasse is steamed, impregnated with NaOH lye and then subjected to disintegration in a screw press.

52704. S. Tajbhai & Sons. Tower bolt and method of manufacturing same. Punching a metal sheet bending it to form a tower bolt.

SEPTEMBER 10.

52705. Council of Scientific and Industrial Research. Modification of a process for the preparation of synthetic tanning materials from gas tar. [Addition to No. 52657.] Decolourising soluble tar sulphonate in highly alkaline condition with aluminium.

52706. Council of Scientific and Industrial Research. Modification of a process for the preparation of synthetic tanning materials from gas tar. [Addition to No. 52657.] Adding novolak resin to gas tar sulphonate.

52707. Council of Scientific and Industrial Research. Modification of a process for the preparation of synthetic tanning materials from gas tar. [Addition to No. 52657.] Mixing novolak resin with gas tar and sulphonating the two together.

52708. Council of Scientific and Industrial Research. Modification of a process for the preparation of synthetic tanning materials from gas tar. [Addition to No. 52657.] Mixing sulphonated novolak resin with gas tar sulphonate decolourised under alkaline conditions.

52709. Council of Scientific and Industrial Research. Modification of a process for the preparation of synthetic tanning materials from gas tar. [Addition to No. 52657.] Decolourising gas tar sulphonate under highly alkaline conditions with zinc dust.

52710. Void.

52711. Council of Scientific and Industrial Research. An electronic voltage

regulator for shunt-wound or compound-wound D. C. generators. The regulator consists of an amplifier unit comprising a d.c. amplifier, a power amplifier and ante-hunt circuits, in combination with means for the supply of the plate voltage of the amplifier unit from the same d.c. generator as is being regulated.

52712. Q. A. Kidwai. Ring shaped separators for separating and supporting the balloons of yarn of a ring spinning frame. Each bobbin revolving inside a ring-shaped separator with an inlet for yarn and an arm for support.

52713. British Telecommunications Research Limited. Improvements in automatic control devices for use in telecommunication or like systems. (September 10, 1953.) Regulation in gain, frequency and phase effected by connecting an automatic control unit.

52714. Aschaffenburg Zellstoffwerke Aktiengesellschaft. Process for the treatment of sugar cane bagasse for the manufacture of paper. Digesting bagasse incompletely with alkali sulphite, removing the outer skin, subjecting the separated fibres to special treatments such as grinding.

52715. Haribole Das. Improvements in or relating to pressure cookers. A safety valve arrangement with a whistle is provided on the cooker.

52716. C. B. Goff Automatic mechanical signal wire compensator. Comprising a cogwheel fixed to the chain wheel along which passes a signal wire, an operating rack connected to the signal, a guide for moving the chain wheel up and down and a counter weight suspended from the chain wheel.

52717. General Electric Company. Improvements in or relating to lamp base and holder. Recessed contact type base of electric lamp with a spring acting contacts of a lamp holder.

52718. Rubery, Owen & Company Limited. Improvements in foundry moulding machines. Comprising a turn table carrying plurality of patterns, a loading station where moulding box is fitted to a pattern, a filling station for filling moulds box with sand and a squeezing station and an unloading station where mould is removed, fluid operated means for filling, squeezing and effecting removal of mould, and means for arresting the movement of table.

52719. Uniton Limited and G. C. Wright. Improvements in building slabs. Consisting of a flat straight-sided slab body reinforced along two opposite edges by metal channel-section members provided with ribs and complementary recesses.

52720. Standard Telephones and Cables Limited. Improvements in or relating to electric signal amplifiers. (September 11, 1953.) Including a west and an east line, amplifiers for transmitting in respective directions, first and second hybrid transformers, third and fourth hybrid transformers and negative feedback paths for the respective amplifiers.

52721. Pertrix-Union G.m.b.H. Improvements in or relating to galvanic pile batteries. [Addition to No. 48997.] A thin conducting layer is provided on the side of depolariser remote from negative electrode.

SEPTEMBER 11.

52722. Void.

52723. British Telecommunications Research Limited. Improvements in or relating to telephone or like systems. (May 27, 1952.) [Divided out of No. 49629; ante dated to May 25, 1953.] Movement of operating members brought by energisation of coupling magnet which operates a connecting member.

52724. C. C. Wakefield & Company Limited. Improvements in or relating to lubricating compositions. (September 17, 1953.) Comprising a neutral ester or mixture of esters derived from aliphatic or cycloaliphatic dicarboxylic acids and a minor proportion of a hydroxy-substituted diadyl thioether.

SEPTEMBER 13.

52725. Asahi Chemical Industry Co., Ltd. Improvements in or relating to method of spinning apparatus for spinning rayon or the like fibres. Wherein during the removal of spun thread cake from the spinning pot the pumping of spinning solution through the spinnerets is reduced to a minimum.

52726. Pending.

52727. Void.

52728. H. J. Longley. Devices for raising and lowering a carrying platform or like surface in a substantially level manner, particularly for use in trucks

carts borrows, trailers, trolleys or like vehicles. Comprising a runway for a platform, said runway having at one end an upwardly inclined extension, the platform also having an inclined extension.

52729. (Mrs.) Winifred May Waller. Improvements in and relating to copper-base alloys and the production thereof. (December 24, 1953.) [Addition to No. 47370.] Alloy comprising 4-22.5 per cent nickel, 4 to 20 per cent zinc 0.5 to 3.5 per cent cadmium, not less than 55 per cent of copper, nickel being not less than $\frac{4}{5}$ th and not more than $\frac{5}{4}$ th of zinc, and at least one other metal such as silicon, Manganese, titanium, vanadium etc. in small quantities.

52730. American Cyanamid Company. Improvements relating to shaped polyacrylonitrile-containing articles. (June 7, 1954.) By contracting the length of the oriented article at least 20 per cent by heating while the article has initial water content of at least 9 per cent.

52731. Industrial Rayon Corporation. Improvements in or relating to a method for simultaneously processing a plurality of viscose, synthetic and the like yarns. Simultaneously drawing a plurality of separate ends, bringing said yarn together to form a bundle, advancing said bundle through a helical path, subjecting the yarn to the desired processing and then separating the said bundle into original constituent yarns.

52732. Void.

52733. Coal Industry (Patents) Limited. Improvements in methods of washing coal slurries. Washing coal slurries by use of a concentrator table wherein at least a part of the slurry is fed directly to a slurry dewatering screen without previous treatment on a concentrator table.

52734. Void.

52735. Western Electric Company, Incorporated. Improvements in or relating to electromagnetic wave devices such as travelling wave tubes. (February 9, 1954.) Comprising means for propagating the travelling wave along an extended path, means for projecting electric beam parallel to and inductively related to said path and transmission means having non-reciprocal transmission characteristic for allowing the wave in one direction only along said path.

52736. Genatosan Limited. Production of organic plastic materials in expanded or cellular form. (October 14, 1953.) Incorporating azodicarbonamide with a thermo hardening organic plastic material and heating the mixture for decomposing the amide and hardening the plastic material.
52737. Standard Telephones and Cables Limited. Improvements in or relating to arrangements for reducing interference in radio communication systems. (October 16, 1953.) In which separate signals are conveyed over separate paths by modulation of respective carrier waves of slightly different frequencies, each path comprising repeaters and the paths coming into proximity, there is means for applying dispersal signal to frequency or phase modulate one of the carrier waves, the frequency band of the dispersal signal being outside the frequency band of communication signals.
52738. The Holt Bracken Breaker Company Limited. Improvements relating to breaker bars for use in destroying growing bracken and similar weed growths. (October 2, 1953.) The breaker bar has a core of inexpensive material and is encased by a sheath of wear resistant material.
52739. J. M. Houston. Improvements in or relating to water conservators. Comprises one or more water delivery compartments, each of which is divided into an inner chamber which is in communication with a main supply tank, and an outer chamber provided with a delivery spout, and a hand operated device for scooping the water from the inner chamber into the delivery chamber.
52740. Dr. Ing. S. B. Malvica. A device which alternately nullifies and intensifies the magnetic fields. Quadripolar system of two magnets with like poles on same side, caps or rings of ferrous material on poles, windings around them and magnetic bridges joining caps or rings on like poles.
52741. The Telephone Manufacturing Company Limited. Improvements in and relating to electro-magnetic switches. Comprising a main operating magnet, contact sets, finger magnets and an interference piece.
52742. T. Yoshioka. Improvements in or relating to crusher. Comprises high speed rotating hammers together with one or more granulating regulators, said regulators being movable so as to be near to or distant from the hammers.
52743. Void.
52744. Standard Pharmaceutical Works Ltd. Improved process and nutrient medium for producing penicillin. Medium containing mustard oil cake or sesame oil cake or groundnut oil cake either individually or in any combination.
52745. F. Bock. Process for producing pre-stressed reinforced concrete structural components. (February 5, 1954.) Reinforcing irons bent to hair in pin shape and inserted into moulds with bent ends supported against anchor plate at one end by wedge shaped guiding members and the free ends supported by bearing members against another anchor plate; prestressing effected after hardening of concrete by local displacement of wedge-shaped members.
52746. Void.
52747. T. Hindmarch. Improved fluid pressure operated brake or coupling (September 17, 1953.) Transmission of torque by way of friction members, when brake or coupling is engaged, is between two concentric annular ring members.
52748. Deutsche Gold-Und Silber-Scheidanstalt vormals Roessler. Process for the manufacture of ceramic, mouldable, hydraulically setting, porous masses, for example for the production of structural elements employed particularly in building. Characterised by converting mixtures into non-pourable mass, kneading the same and then swelling with gases.
52749. Dorr-Oliver Incorporated. System and apparatus for the treatment of polluted liquids. The colloid bed being made up of discrete solids in a depth of from one to two feet and adapted to be dosed with aerated liquid.
52750. Metropolitan-Vickers Electrical Company Limited. Improvements relating to reduction of vibration transmission from machines and apparatus. (June 11, 1954.) Resilient coupling means provided between two or more relatively movable parts disposed within a casing and a torque transmitting external shaft or shafts journaled with respect to the casing.

SEPTEMBER 14.

SEPTEMBER 15.

52751. Dr. A. Wimmer. Improvements in or relating to process for the manufacture of pre-product and steel. In a process of making preproduct and steel, use is made of an alloy comprising 70 per cent to 10 per cent of aluminium, 10 per cent to 70 per cent of silicon, and a remainder of iron, titanium and like constituents.

52752. International Business Machine Corporation. Electric information storage system. (May 13, 1954.) Including means for recording one part of a bit of data in one store and a remaining part of such bit of data in a second store, and means for reading out stored information simultaneously and for producing and output indicative of the order in which said parts were recorded in said stores.

52753. E. D. O. Bernier. Biscuit-sandwich making machine. Machine having means to dispense biscuits from stack, to charge a filler on the biscuit, to deposit another biscuit from another stack on the charge filled biscuit and to discharge the sandwich.

52754. Fermeture Invisible S. A. Improvements in slide fasteners of the covered type. The central block of the slider is provided with guiding surfaces which help the lacking members in coming into mutual engagement along a single line.

52755. Ruhrchemie Aktiengesellschaft. Process for the production of chloromethylene-terahydroindanes. Chlorinating in presence of ultraviolet light 4, 5, 6, 7, 8, 8-hexachloro-4, 7-methylene 3a 4, 7, 7a-tetrahydro-indane formed by reacting hexa-chlorocyclopentadiene with cyclopentene.

52756. Dr.-Jug. Rudolf Meyer. Improvements in or relating to lubricating system especially for the crank-shaft of two-stroke internal combustion engines. Oil collecting member enclosed by housing external to crankshaft, fed by oil thrown up by transmission elements and communicating with crankshaft through at least one passage.

SEPTEMBER 16.

52757. Void.

52758. K. S. G. Doss and Vishnu. Improvements in or relating to the curing of the massecuites in the manufacture of

white sugar or refined sugar. The process comprises subjecting massecuites to electric current, whereby the electrical resistance of massecuites is utilized for heating the same.

52759. Gestetner Limited. Improvements in or relating to offset rotary printing machines. (August 4, 1954.) Comprises a blanket cylinder, impression cylinders, ink and water supply and control system.

52760. Gestetner Limited. Improvements in or relating to offset rotary printing machines. (August 4, 1954.) Comprises plate cylinder water supply systems, eccentric blanket cylinder and control systems.

52761. Ciba Limited. Disinfecting and preserving agents and pharmaceutical preparations containing new carboxylic acid amides. (April 20, 1953.) [Divided out of No. 51725; ante-dated to April 19, 1954.] The preparations comprise N-(2-oxy-halophenyl) salicylic acid amide and a pharmaceutical carrier or a carrier suitable for disinfecting preparation.

52762. Void.

SEPTEMBER 17.

52763. Harnischfeger Corporation. Improvements in a driving and braking circuit for an electrically driven apparatus. Circuit including a controller for the motor having an 'off' position and contacts providing 'on' positions and other contacts so arranged with first said contacts to energize the winding of an induced current brake, only when the controller is in its 'on' positions after having been first moved from its 'off' position to an 'on' position corresponding to a higher motor speed than the one on its 'on' positions.

52764. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to refrigerating devices comprising a gas-refrigerator. As auxiliary medium is used is made of vapour the boiling temperature of which is less than 20°C at pressure of 20 atmospheres while pipe-system at a maximum contain 1 gram-molecule per dm³.

52765. Boots Pure Drug Company Limited. New heterocyclic compounds. (October 2, 1953.) By condensing a phenanthridine with a halo-pyrimidine.

SEPTEMBER 18.

52766. Siemens-Schuckertwerke Aktien-gesellschaft. Condenser-excited asynchronous generator. Provided with parallel capacitance and additional circuit elements.
52767. N. V. De Bataafche Petroleum Maatschappij. Process for cementing a bore hole. Mixing hydraulic setting agent with a water miscible organic liquid which does not react with the cement.

SEPTEMBER 20.

52768. Void.
52769. Void.
52770. Void.
52771. Void.
52772. Union Carbide and Carbon Corporation. A replaceable anode and cathode unit for a galvanic cell. (July 26, 1954.) The galvanic cell of the wet type has as a cathode a pair of perforated metallic panels with carbon plates bonded to them.
52773. The English Electric Company Limited. Improvements relating to electro-magnetically operated valves. (October 5, 1953.) Armature operated valve in one position connects an auxiliary port to the main port which in this position is sealed off by the valve means from the common port.
52774. Carding Specialists (Canada), Limited. An improvement in or relating to the treatment of carded webs of textile fibres in a carding machine. Comprising in combination a card-clothed doffer rolled rotated in the same direction as the lower pressure roller and a card-clothed striffing roller rotating in the opposite direction.
52775. Societe d'Applications Generales d'Electricite et de Mecanique. Improvements in and relating to circular looms. Comprising a feeler mounted on the trailing end of the weft-laying beak of a shuttle end actuating a relay.
52776. Ciba Limited. Process for the manufacture of new disazo-dyestuffs. A tetrazotized 4 : 4' diaminodiphenyl compound free from solubilizing groups and containing a substituent in each of 3-3' position is coupled on both sides with azo component of the formula $C_6H_3XYZ \text{ NH-CO-HC}=\text{C-OH-CH}_3$.
52777. Libbey-Owens-Ford Glass Company. Glass sheets bending apparatus.

Spreading hingedly connected, sections of the mold to open position supporting a glass sheet as a beam thereon and also intermediately and subjecting it to bending temperature to soften and permit the mold to closed position maintaining the intermediate supports.

SEPTEMBER 21.

52778. Societe Des Usines Chimiques Rhone-Poulenc. Purification of chlortetracycline. (August 24, 1954.) By extracting cake containing chlortetracycline as a salt of calcium, Ba, St, Mg with acidified normal propanol or tertiary butanol, adding to the alcoholic extract water soluble chloride and isolating chlortetracycline.
52779. J. Kamlet. Improvements in or relating to the manufacture of a protein supplement for ruminant feeds. Urea is heated at $120^\circ\text{--}205^\circ\text{C}$ to effect substantial autocondensation of urea to urea auto-condensation products amongst which biuret predominates.
52780. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to methods of producing polyhalogen phenyl sulphones and the use of such compounds for combatting the stages of development of mites. Coupling 2 : 4 : 5-trihalogenobenzene - sulpho-halogenide with benzene, monohalogeno benzene or 1 : 2 : 4-trihalogenobenzene in the presence of an agent like AlCl_3 .
52781. Void.
52782. Void.

SEPTEMBER 22.

52783. Void.
52784. Bhawani Charan Dutt and Tarini Caran Dutt. Improvements in or relating to garden or like umbrellas. Fitting tapered end of central wooden rod with metal screw spike having disc working on its threaded portion.
52785. British Ropes Limited. Improvements in or relating to wire ropes. (November 18, 1953.) Treating steel wire strands by imparting a controlled degree of plastic flow with uniform pressure all round.
52786. Ruhrchemie Aktiengesellschaft. Process for the production of granular, non-caking ammonium sulphate-ammonium nitrate fertilizer. By precipitating a thin layer of iron hydroxide/or iron oxide over the surface of Ammonium Sulphate ammonium nitrate granules.

52787. N. V. De Bataafsche Petroleum Maatschappij. Process for the preparation of ammonium sulphate. A double salt of calcium sulphate and ammonium sulphate is reacted with a solution of ammonium carbonate which is obtained by passing ammonia and carbon dioxide into a solution of ammonium sulphate of a particular concentration.

52788. Investigacao E Exploracao Industrial (S.A.R.L.). Improved process and apparatus for the treatment of hard-shelled nuts for the separation of the kernels from the shells thereof. (September 25, 1953.) Softening the nuts or seeds in water, subjecting the softened nuts or seeds to a predetermined pressure and then suddenly releasing the pressure so as to split the shell along the natural cleavage line.

52789. Fairbairn Lawson Combe Barbour Limited. Improvements in or relating to spinning roving or the like frames. (October 1, 1953.) The apron driving roller is located outside the aprons and is adapted and arranged so as to make direct driving contact with the outer faces of the aprons.

SEPTEMBER 23.

52790. M. J. Udy. Manganese recovery. By subjecting the charge to the action of a reducing agent in a covered arc electric furnace provided with vertical electrodes.

52791. H. W. Waldenmair. Improvements in or relating to butterfly valves. [Addition to No. 50871.] Recess provided in the spring loaded ring attached to the butterfly valve flap, which ring has axial movement.

52792. Ciba Limited. Pharmaceutical preparations containing a new piperidine compound. [Divided out of No. 49941; ante-dated to July 20, 1953.] Comprises 2-diphenylmethyl-piperidine or its salts, together with a pharmaceutical carrier.

52793. Ciba Limited. Pharmaceutical preparations containing new substituted piperidines. [Divided out of No. 49941; ante-dated to July 20, 1953.] Comprising 2-diphenylmethyl-piperidine compounds together with a suitable pharmaceutical carrier.

52794. Void.

SEPTEMBER 24.

52795. The National Smelting Company Limited. Improvements in or relating to the condensation of metal vapours.

(October 6, 1953.) Metallic vapours are passed in a low roofed condenser having a bath of a molten metal.

52796. Compagnie Francaise Des Matieres Colorantes. Method of preparation of sulphamic aromatic acids. (September 17, 1954.) 4-nitroso-diaryl amine is reacted with one or more salts of sulphurous acid in the absence of caustic alkali and in a medium capable of dissolving at least a part of the starting materials.

52797. Calument & Hecla, Inc. Method and apparatus for manufacturing integral finned tubing. Comprising first and second groups of co-axial annular portions, the annular portions of each group being spaced from each other axially of the roll to provide annular spaced between adjacent annular portions and having tips at the periphery of uniform pitch.

SEPTEMBER 25.

52798. Council of Scientific and Industrial Research. A process for the preparation of synthetic tanning materials. Sulphonating phenol-aldehyde resin with a product obtained by condensing sulphonated non-phenolic aromatic compound with formaldehyde.

52799. Council of Scientific and Industrial Research. A process for the preparation of synthetic tanning materials. Sulphonating phenol-aldehyde resin with a product obtained by condensating sulphonated phenolic aromatic compound with formaldehyde.

52800. Void.

52801. Council of Scientific and Industrial Research. A process of preparing a modified gelatin suitable for trans-fusion. By the regulated action of proteolytic enzymes on gelatin prepared from bones.

52802. Boots Pure Drug Company Limited. New compositions comprising sulphur containing compounds. Composition contains 1, 2-dichloro-1 : 2-di-(phenylthio) ethylene together with a diluent or carrier.

52803. American Cyanamid Company. Improvements relating to the production of cyanamide and/or melamine. (April 30, 1954.) Heating a vapour mixture of HCN and oxygen to a temperature of at least 350°C in the presence of a catalyst of an inert adsorptive material with high internal surface and/or volume.

SEPTEMBER 27.

52804. Satya Industries Ltd. Improvements in head lamps of automobiles motor cycles and bicycles. The lens has on its concave surface facing the bulb a number of linear or circular ribs of angular section the spacing between the ribs gradually widening towards the edge of the lens, the reflex angle of each rib from the rib nearest to and farthest from the centre line of the lens varying from 29° — $36\frac{1}{2}^{\circ}$ and the parabolic contour of the dome shaped reflector being in the ratio of 1.65 : 2.5.

52805. Esso Research and Engineering Company, formerly known as Standard Oil Development Company. Method and apparatus for oil well operations. Comprising a tubular extension member open at both ends adapted to be lowered through the tubing with means for securing the upper end of the tubular member to the interior of the tubing.

52806. Bowaters Development and Research Limited. Gloss meter. (October 12, 1953.) Comprising polarizing elements means for alternately interposing them in the path of light reflected from the surface under measurement, an analyser and means for interposing it in the path of light reflected so that fluctuations of the beam may be eliminated and a light sensitive means for indication, the setting of the analyser determining the glossiness.

52807. O. J. Bruun. Improvements in safety bottle capsules. (July 12, 1954.) Wherein visible portion of pleated skirt has colour contrasting with that of invisible portions.

52808. Imperial Chemical Industries Limited. Improvements in or relating to the surface treatment of titanium or titanium base alloys. (October 9, 1953.) Boiling with concentrated hydrochloric acid solution.

52809. Aladdin Industries Limited. Improvements in or relating to hydrocarbon vapour burners. (October 6, 1953.) Vapour burner divided internally into three super-imposed compartments, the fuel vapour being introduced into middle compartment accompanied by induced air which mingles with fuel, the mixture passing therethrough to the upper compartment where further mixing takes place.

52810. J. N. Wiser. A process for long-time bio-stabilization of dairy products and means for applying same. The products are treated to be brought in the sporic state, all germs destroyed and then subjected to a permanent gaseous pressure.

52811. Void.

52812. Automatic Telephone & Electric Company Limited. Improvements in registering and translating circuits for use in telecommunication systems. (July 9, 1952.) [Divided out of No. 49830; ante-dated to July 1, 1953.] Void after publication. Sequence switching devices arranged in first position to test all the equipments.

52813. Automatic Telephone & Electric Company Limited. Improvements in telephone systems. (July 9, 1952.) [Divided out of No. 49830; Ante-dated to July 1, 1953.] Void after publication. Comprising an electronic translating circuit with any one of a plurality of electronic register.

SEPTEMBER 28.

52814. College of Engineering and Technology, Bengal, Calcutta, Jyotsna Kumar Choudhury and Sailesh Chandra Dasgupta. Harmonic elimination equipment for commercial electric supplies. Filtering harmonic components from mains supply and injecting them back into mains supply in predetermined magnitude and phase to cancel the harmonics in the supply mains.

52815. Waagner-Biro Aktiengesellschaft. Damming wall for weir closures, sluice-gates and the like. Damming wall forming boom exposed to water pressure and bridging spans between pairs of adjacent assembly points of supporting structure symmetrically to centre of the spans in the form of arches acting as diaphragms.

52816. Electraulic Presses Limited. Improvements in and relating to control gear for hydraulic presses. (October 12, 1953.) Means for limiting power stroke of press, reversing motion of table and providing for automatic compensation for the tilting of moving head or table, and for stretch of press columns and deflection of moving head or table under varying loads.

52817. Void.

52818. A Singh. Improvements in or relating to small boilers. A water leg is provided around the fire place.

52819. Void.

52820. Novo Terapeutisk Laboratorium A/s. Process of increasing the physical stability of aqueous suspensions of penicillin compound. [Addition to No. 50215.] Aqueous suspensions of penicillin compounds are stored in ampoules having a rubber cover butyl rubber being employed as rubber material.

52821. Void.

52822. Ciba Limited. Manufacture of new hydrocinnolones. 4-cyano-5, 6, 7, 8 tetrahydrocinnolone-(3) with a reactive ester of an unsubstituted aliphatic alcohol.

52823. Void.

SEPTEMBER 29.

52824. Void.

52825. Jai Prakash. Hollow building frames. Comprising a network of thin ribs running in both direction at intervals thus forming series of hollows in between the ribs.

52826. Tangyes Limited. Improvements connected with hydraulic jacks. End of vent tube of reservoir open to atmosphere disposed beneath liquid level therein when other end within reservoir is above liquid level; when the end within reservoir is below liquid level the other end is above the liquid level.

52827. Glaxo Laboratories Limited. Improvements in or relating to the sealing of bottles, jars, vials and like containers. (October 9, 1953.) Applying metal foil disc having heat sealing adhesive backing to containers neck with impact, subjecting same to heat and pressure and then pressing to sealing.

52828. Les Usines De Melle (Societe Anonyme). For producing condensation products from saturated oxo-compounds. Saturated oxo-compound having at least 3 carbon atoms is introduced into a turbulent stream of water and alkaline agent the rate of flow of the stream being 10-100 times as great as the rate of feed of oxo-compound.

52829. The National Smelting Company Limited. Improvements in or relating to the condensation of zinc in metallic vapour from gases containing the same. (October 6, 1953.) Gases are first

passed through a dust separator and then to a shock chilling condenser.

52830. The General Electric Company Limited. Improvements in or relating to electrical gas discharge tube circuits. (October 5, 1953.) Comprising input paths, equal number of output paths, first gas discharge tubes associated with different input path and output path, second gas discharge tubes associated with different input path and output path, means for striking second gas discharge tubes and means for striking after short delay the first gas discharge tube and means for striking all remaining second gas discharge tubes after said delay.

52831. The General Electric Company Limited. Improvements in or relating to electrical gas discharge tube circuits. (October 5, 1953.) Comprising discharge tubes arranged in groups, each associated with means for deriving voltage signal when discharge exists, path for applying signals, output leads and means for connecting the said paths to said output leads only when signals are applied to the paths upon a particular combination of gas discharge tubes, one in each group being conducting.

52832. The Gora-Lee Corporation. Methods and apparatus for molding articles of plastic or the like. Endless plastic strip is passed between pairs of open cooperating die members mounted in annular succession on a wheel and the diemembers are opened and closed as they travel past whereby pieces of plastic material are blanked out and shaped.

52833. Void.

SEPTEMBER 30.

52834. Council of Scientific and Industrial Research. A process for the treatment of vegetable tan liquors. Treating with aluminium salts.

52835. Council of Scientific and Industrial Research. Preparation of synthetic tanning materials from phenolic bodies. Treating sulphonated phenolic body with resorcinol-formaldehyde condensation product under pressure.

52836. Esso Research and Engineering Company. Improvements in or relating to process of coking residual oils. By fluidizing a bed of finely divided heat carrying particles at a gas velocity of 0.5 to 1.2 feet per second and feeding

the oil at maximum rate determined by a certain formula.

OCTOBER 1.

52837. Void.

52838. Void.

52839. N. V. De Bataafsche Petroleum Maatschappij. Lubricating compositions. Comprising lubricating oil and minor proportions of oil soluble salts of organic cyclic acid, organic sulphonic acid and organic acid of phosphorous.

52840. Tecalemit Limited. Improved air filter for internal combustion engines. (February 12, 1954.) Outer casing having a zone connected to air induction system, a tube extension extending through casing and through which oil is supplied to crankcase and an opening in tube extension communicating its interior with the zone.

52841. The Aluminium Manufacturing Company Limited. Improvements in or relating to fermenting trays for tea leaf. Comprising upwardly extending supporting means and downwardly extending resting means complementary to and adapted to engage a similar supporting means of another tray, whereby a plurality of trays can be stacked one above the other.

52842. Standard Telephones and Cables Limited. Improvements in or relating to electric semiconductor devices. (October 2, 1953.) Pointed conductor is applied to the surface of the semiconductor and forming current is passed through the contact.

52843. Genatosan Limited. Production of rubber and organic plastic materials in cellular or expanded form. (October 6, 1953.) Heating in a mould a rubber mix or an organic plastic material to which has been added terephthalazide.

52844. J. Hamnett. An improved incubator for incubating eggs. (October 8, 1953.) Comprising angularly displaceable drum-like container provided with segmentally disposed frames having clips to receive eggs and move these into different positions.

OCTOBER 8.

52845. Inventa A. G. fur Forschung und Patentverwertung. Improvements in or relating to decomposition of lignin. Subjecting lignin to continuous hydrogenation at elevated temperature and pressure.

52846. Inventa A. G. fur Forschung und Patentverwertung. Improvements in or relating to decomposition of lignin. Subjecting lignin to continuous hydrogenation at elevated temperature and pressure in the presence of a catalyst.

52847. Inventa A. G. fur Forshung und Patentverwertung. Improvements in or relating to recovery of lignin from back lye. Continuous precipitation with carbon dioxide at elevated temperature and pressure.

52848. Void.

52849. Void.

52850. Void.

52851. Void.

52852. Void.

52853. Void.

52854. British Telecommunications Research Limited. Improvements in or relating to power feeding arrangements for telecommunication or like system. (October 9, 1953.) Power supplied to plurality of stations from one end and in the event of a fault power supply is automatically cutoff and emergency supply arrangement is made.

52855. British Telecommunications Research Limited. Improvements in or relating to testing arrangements for telecommunication systems. (October 15, 1953.) Comprises separate Go and Return paths and at each intermediate station a bandpass filter is arranged.

52856. C. S. R. Wotton. Electrical cautery for surgical and other uses. (October 5, 1953.) Comprising a knife member formed with a blade portion and a hollow shank portion and an electrical heating means adopted to be positioned in the hollow of the shank.

52857. Technicolor Motion Picture Corporation. Improvements in or relating to color selective optical systems. [Addition to No. 46233.] Coating on the transparent support having a tapered thickness varying according to a ratio differing from the inverse cosine of the incident angles of rays, whereby a reflected colour band of uniformly distributed energy can be selected from the spectrum and a cut-off of the colour band can be sharpened.

52858. Cable Makers Australia Proprietary Limited. Machine for applying an insulatory coverage to helically-set non-circular, electrical cable cores. (October 29, 1953.) Coaxial spaced sealing and extrusion dies apertures of which

are cross-sectional envelopes of cable core and its coverage respectively end means for packing extrudable coverage material into space between dies and mechanism for rotating dies permitting passage of core through them.

52859. Ateliers De La Motobecane. Improvements relating to hubs for wheels. (February 19, 1954.) One of the two spoke flanges is made removable from the hub permitting removal of decorative surrounding drum.

52860. H. Tomasson. A pillow. In the central part of the lower edge of the pillow there is a recess having a depth at least $\frac{1}{3}$ of its length, and the part immediately above the recess has a thickness at least $\frac{1}{3}$ of its length.

52861. E. Freyssinet. Surface areas of pre-stressed concrete and their method of construction. Wherein the pre-stressed concrete layer is disposed on the ground with means for uniforming the frictional forces and is divided to receive means for forcing apart its edges and also wedging members.

52862. Parke, Davis and Company. Process for the preparation of tertiary amino compounds. Reacting aromatic-aliphatic alcohol with lower aliphatic primary alcohol and alkylating the aminoalkyl ether so obtained.

52863. N. V. Philips' Gloeilampenfabrieken. Improvement in or relating to electrode systems comprising at least one semi-conductive member more especially but not exclusively a crystal diode or a transistor Part surrounding a semi-conductive member has a lower specific resistance to heat flow than the parts contiguous with a seal.

52864. Boots Pure Drug Company Limited. New sulphur containing compounds. Reacting a benzthiazole-2-thiol with a substituted benzyl halide.

52865. Boots Pure Drug Company Limited. New acaricidal preparation. Comprises benzylthio benzthiazoles with a carrier or diluent.

52866. J. Bibby & Sons Limited and The A. P. V. Company Limited. Improvements in or relating to the fractional distillation of high boiling liquid mixtures. Wherein prior to fractionation, crude liquid feed stock is contacted in a dehydrating chamber with a counter current of superheated steam drawn from the fractionating column.

52867. J. Bibby & Sons Limited and The A. P. V. Company Limited. Improve-

ments in or relating to the fractional distillation of high boiling liquids mixtures. Saturated steam is generated by heat exchange with vapours from fractionating and stripping columns, superheated and introduced back into the columns.

52868. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of novel xanthine derivatives. Reacting 2-chlorobutanone-3 with a salt of 1, 3-di-(lower alkyl)-xanthine in organic solvent.

52869. William Jessop & Sons Limited. Improvements in or relating to alloys. Containing 2 per cent. to 15 per cent. tungsten or containing .001 per cent to .005 per cent. boron or mixture of two each being within the respective range.

52870. High Duty Alloys Limited. Improvements relating to rain-water pipes. Expanding one end of the extruded pipe to form a socket and securing to said socket a lug for holding the pipe to the wall of a building.

52871. Macleans Limited. Improvements in or relating to the preparation of the carbonate salts of calcium and magnesium and to products obtained thereby. (November 13, 1953.) Mixing a solution of a carbonate with a solution of salts of aluminium and one or both of the metals magnesium and calcium.

52872. The Steel Company of Wales Limited. Improvements in steel manufacture. (November 6, 1953.) Void after publication. Having a liquid cooled delivery pipe directing oxygen to impinge on the charge retractably mounted above the furnace.

52873. Ciba Limited. Manufacture of new piperidines. A phenyl alkyl pyridine is hydrogenated, or a 5-oxo-penta-



R^1

noic-1-acid nitrile phenyl-alkyl radical, is treated with hydrogen in the presence of a catalyst.

52874. Bord Na Mona. Improved burner for peat fuel. Cross section of the air jet nozzle normal to the direction of the jet has its maximum dimension in the vertical medial longitudinal plane of the fire box.

52875. Dr. C. Otto & Comp. G.m.b.H., Ko-We Niederschachtoven Gesellschaft m.b.H., and Professor Dr. W. Fuchs. A process for the purification of tar-containing gases. Contacting gas with a non-metallic multi-substance catalyst.

52876. Rheinpreussen Aktiengesellschaft für Bergbau und Chemie. Process for the catalytic hydrogenation of carbon monoxide. (September 9, 1954.) Treating the catalyst with an industrial gas containing carbon monoxide and one or more inert gases.

OCTOBER 9.

52877. Dr. E. Fehrer. Apparatus for feeding vegetable fibres, hair and the like to spinning machines. A carding unit arranged before the spinning machine and a measuring unit registering the ejection of carded material and controlling the feeding of material to the carding unit.

52878. McGregor & Balfour Limited and D. D. McGregor. Improvements in bobbins for textile spinning machines. (October 12, 1953.) Comprising a barrel consisting of a tube of non-metallic material and at least one co-axial tube of metal and at least one flange fastened to an end of the barrel.

52879. Imperial Chemical Industries Limited. Improvements in or relating to the art of delay electric firing of blasting explosive charges and appliances suitable for use in delay electric firing circuits for such charges. (Addition to No. 49492.) [Divided out of No. 49492; ante-dated to May 4, 1953.] Providing a short delay blasting equipment by which the possibility of the blasting charges firing out of their proper order is eliminated and which is capable of operation so as to fire any desired number of blasting charges in a round.

52880. Imperial Chemical Industries Limited. Improvements in or relating to the continuous manufacture of propyl nitrates. Keeping an aqueous solution of nitric acid, urea and Ammonium nitrate at atmospheric pressure and at 105–112°C and introducing separate streams of nitric acid and corresponding propyl alcohol and collecting the propyl nitrate.

52881. B. B. Chemical Company Limited. Improvements in or relating to adhesive bonding. A strand of solid non-metallic adhesive material comprising polyethylene an isobutylene polymeric material and a hydrocarbon resin.

52882. Kinki Nippon Tetsudo Kabushiki-Kaisha. Improvements in or relating to an automatic rail oiler. Supply of oils is stopped when the wheel is running in the normal position relative to the rail.

52883. T. Hindmarch. Improvements in power transmission mechanisms. [Addition to No. 35842.] Plurality of intermediate shafts with pinions meshing with respective pinions on the input shaft; desired path of drive selected and load balanced through clutch associated with each pinion on intermediate shafts; output shaft driven from each intermediate shaft.

52884. Void.

52885. C. B. Hoole and C. P. Sutton. Improvements in rotary burrs. Two or more hard metal circular cutter sections mounted on an axial column extending from a shank providing a continuous cutting profile.

52886. Gestetner Limited. Improvements in or relating to collapsible containers. (October 21, 1953.) Having a shoulder piece which is locally weakened by one or more radial grooves in the wall of the shoulder piece.

52887. Rheno A. G. Improvements in relating to disinfection of water by ozone or ozone containing gaseous mixtures. Disinfecting water, with ozone within a water-conduit provided with means for keeping the aqueous and gaseous phases in intimate contact.

OCTOBER 13.

52888. T. W. Wlodek. Improvements in the physical properties of metal and other plastic materials in structural members. Applying pressure at spaced intervals to permanently deform material in spaced portions of the member and bearing juxtaposed portions of material of the member in its normal elastic form.

52889. J. D. Edal Behram. Improvement in or relating to a self closing automatic water tap for preventing water waste. A float hinged to a tube which is continuous with a top valve and a sliding rod through which the float arm passes being housed in the float support tube.

52890. Void.

52891. Champalal Gupta. Methods of producing resinous antacid compositions for human therapy. The composition comprises a condensation product of phenol formaldehyde and an alkylene polyamine with a pharmaceutical carrier.

52892. Siemens-Schuckertwerke Aktiengesellschaft. Parallel running of self-regulating synchronous generators.

Generators, during parallel running connected across output terminals and excitation circuit leads.

52893. Void.

52894. President, Forest Research Institute and Colleges, Dehra Dun. Improvements in or relating to the production of thermosetting adhesive composition. Treating gluten in alcohol and cashew-nut oil with formaldehyde.

52895. President, Forest Research Institute and Colleges, Dehra Dun. Improvements in or relating to a process for improving the properties of light timbers like *Cryptomeria japonica* to make them suitable for pencil slats. Wherein a plank of light timber is subjected to pressure with or without heating.

52896. J. R. Geigy A.-G. Process for the production of organically soluble stilbyl triazole compounds. Organically substituted 2-(stilbyl-4"-4:5-arylo)-1:2:3 triazole compounds are obtained by conversion of the sulphuric acid groups in sulphonic acid aryl ester, sulphonic acid amide, by way of the acid halides.

52897. S. Dodd & Sons Limited. Improvements relating to cotton gins. (October 20, 1953.) The leather roller is supported by swinging arms each of which being acted upon by a spring for applying pressure to the roller.

52898. S. Dodd & Sons Limited. Improvements relating to gins. (October 20, 1953.) Comprising an elongated member having stepped surfaces facing the rollers.

52899. Imperial Chemical Industries Limited. Process for the manufacture of new acid dyestuffs. (October 21, 1953.) Sulphonating 6-arylamino-2-aryl-1':9'-anthrapyrimidine so as to introduce at 2 sulphonic acid group into the molecule.

52900. W. Robertson. Improvements in trousers. (October 21, 1953.) Having a waist band with rear portion formed as tunnel open at each end and a pair of belts one end of which is fixed to front portion of waist band passes round the waist and pass through a loop at the opposite end.

52901. B. Rajnai. Improvements in hand-operative knitting machines. (October 14, 1953.) Comprising in combination a needle-bed embodying a row of reciprocal needle-retaining means and shuttle means.

52902. B. Rajnai. Improvements in hand-operative knitting machines. (October 14, 1953.) Each comb support comprising a movable comb-holding member, an adjustable wedge-block and means for locking the comb-holding member.

52903. Menrow Limited. Filter plates. Having apertures with sides converging in direction of flow packed with pulverulent filtering medium.

52904. J. Morris and J. Syme. Improvements in and relating to hose and like connections. Comprising two complementary male and female members wherein the female member is recessed circumferentially to admit a resilient washer of inwardly facing C-section.

52905. Masseys-Harris-Ferguson Inc. Improvements relating to subsoilers with or without conduit-laying attachments. Cutter beam with knife edges on both sides of its middle part secured at its middle to draw bar ends of which are pivotally mounted, the beam being mounted at its upper end and its knife edges being interchangeable by reversing the drawbar end for end.

52906. Standard Telephones and Cables Limited. Improvements in or relating to electric trigger circuits. (April 6, 1954.) Including a crystal triode, means for applying control voltage for changing the condition of the crystal triode and further means for applying a control voltage for preventing the crystal triode from being switched from a high current condition to a low current condition when said further potential is applied.

52907. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to television systems. Image electrode is constituted by a layer of semi conductive material onto which the image is projected optically.

OCTOBER 14.

52908. Automatic Telephone & Electric Company Limited. Improvements in four-terminal networks. (October 22, 1953.) Having an image impedance which is constant and real for all frequencies within a frequency range and which where terminated by a resistor has a driving point impedance the logarithm of whose modulus varies the terminating resistor.

52909. Bendick Paul Limited. Self-levelling ladder. Comprises rigidly

- interconnected pairs of front and back legs slidable pin and slot interconnection means pivotally associating corresponding legs of each pair and supplemental means for limiting pivotal spreading apart of said pair of legs.
52910. A. Schatzschock and A. Weitzl. Method for the production of filing tools. [Divided out of No. 50156; ante-dated to August 26, 1953.] Producing drum files from metal strip wherein cutters connected to the marginal zones of the strip are produced singly, in pairs or in groups from metal strip, by means of cuts made obliquely to the plane of the strip metal, and finally metal strip is rolled to form a hollow body.
52911. Andre Rubber Company Limited. Improvements in or relating to resiliently controlled or snubbed hinge joints. (November 13, 1953.) Hinge leaves constrained to be moved relatively angularly about an axis and having opposed surfaces remote from axis and oblique to direction of relative movement; mass of elastomeric material arranged between these surfaces in non-adherent rolling engagement so as to be deformed by relative angular movement of the leaves.
52912. Rheno A.G. Apparatus for producing ozone. Electrodes are shaped as conical shells and at least two such electrodes are arranged one above the other.
52913. Union Carbide and Carbon Corporation. Welding composition for depositing soft iron. (August 9, 1954.) Soft iron deposit is formed from a carbon steel electrode and the base metal fused by providing in the welding composition 40 per cent, to 60 per cent, by weight of iron oxides, and if desired upto 2 per cent, of an oxidic vanadium compound and upto 10 per cent. of titania.
52914. Chas. Pfizer & Co., Inc. Improvements in or relating to vitamin products and the preparation thereof. Contacting a lower alkanolic acid ester of vitamin A with an ester of a higher aliphatic acid in the presence of an alkaline catalyst.
52915. Eli Lilly and Company. Improvements in or relating to synthesis of lysergic acid and homologues thereof and intermediates therefor. Dehydrogenating a carboxy- Δ^{10} -ergolene with deactivated Raney nickel catalyst.
52916. Anzin Limited. Improvements in or relating to froth flotation. The frother agent is 2-ethyl hexanol, polyoxyethylene ether alcohol or ether, the frothing agent forming a molecular association with the collector at the air/water, and solid/liquid inter-faces.
52917. The Goodyear Tire and Rubber Company. Improvements in hydraulic torque controller for brakes. Including a torque control valve, a three way valve for controlling supply to the pressure responsive element and a cylinder for controlling the three way valve, torque sensing means and a piston in the cylinder.
52918. Ciba Limited. New triarylaminotriazines and process for their manufacture. (October 21, 1953.) A triazine compound containing exchangeable substituents such as halogen atoms is reacted with a diamine $H_2N-R-NH_2$ wherein R is an arylene radicals or two arylene radicals linked by a divalent organic residue.
52919. Metropolitan-Vickers Electrical Company Limited. Improvements relating to apparatus for indicating and/or controlling a dimension of articles moving in the direction of such dimension. [Addition to No. 49842.] [Divided out of No. 49842; ante-dated to July 2, 1953.] Including two detectors for producing pulses in response to the passage of leading and trailing edges of articles through predetermined locations and an integrator adapted to integrate a signal proportional to the speed of an article, said integrator being operated by an electronic switch controlled by trigger circuits producing square wave.

OCTOBER 15.

52920. Dr. Ing. T. Wimmer and Demag Aktiengesellschaft. Process for the production of high quality ferro-manganese and steel. Low grade manganese ores are melted with metallic fuel by which iron rich in phosphorus low in carbon, and slag containing manganese obtained, iron processed for producing steel and slag mixed with carbonaceous fuel processed for ferro-manganese or protected optically.

52921. E. Toenniessen. Flyer draft system. Stands for supporting lower cylinders extending throughout the length of the machine, cleaning means from the lower cylinders and their co-operated upper rollers.

52922. E. Toenniessen. Top roller holder for draft systems. The upper rollers are carried in a cap bar made in two parts, the cap bar being pivoted at the inner end upon a slide.
52923. N. M. Shah. A machine for the conditioning of yarn. Wherein the bobbins rolls along the sloping baffle plates arranged in a chamber and conditioning liquid is sprayed thereon.
52924. R. Amritlal and Mrs. Prakash Rani Ranchhodlal Amritlal. A machine particularly for the application of flocculent substance on a surface. Comprising a metal tray on which the flock is deposited, an electrostatic generator comprising a pair of rollers, a belt travelling over said rollers, means for rotating the rollers, a metal strip in the vicinity of the roller and a cage above the upper roller.
52925. Void.
52926. W. R. Brooksbank. Improvements in means for securing a picking strap to the picker of overpick looms. The picking strap is so secured to the picker that the axis of width of the strap does not lie parallel to the axis of the spindle over which the picker slides.
52927. W. R. Brooksbank. Improvements in pickers and picking bands for looms for weaving. (October 23, 1953.) Employing an endless band as a picking strap and changing the position of the strap connected to the picker and picking stick from time to time thereby distributing the wear uniformly.

OCTOBER 16.

52928. Libbey-Owens-Ford Glass Company. Method and apparatus for bending glass sheets. Locating the glass sheet on the mould, raising its temperature to softening point by passing through a furnace, where it bends into conformity with the shaping surface cooling it below bending temperature and separating it from mould.
52929. F. Badin. Improvements in or relating to powder couplings. (March 5, 1954.) Comprises a casing of lenticular shape rigidly connected to a driving or driven shaft, and a rotor mounted rotatably within said casing, said rotor having deformations around its periphery.
52930. Dorr Oliver Incorporated. Improvements in sewage treatment. Subjecting the sewage to clarification treatment in a clarifier, withdrawing

the sewage sludge and subjecting it to concentration and anaerobic digestion.

OCTOBER 18.

52931. Inventa A. G. für Forschung und Patentverwertung. Improvements in or relating to decomposition of lignin. Continuous treatment with hydrogen at above 350°C and pressure above 300 atoms in presence of catalyst and carrying the decomposition in presence of water.
52932. Henschel & Sohn. G.m.b.H. Means for the removal from locomotives having an induced-draught blower of particles of solid fuel entering the smoke-box together with the combustion gases. (November 24, 1953.) Steam or air actuated ejector at or near the upper end of the conduit withdraws and discharges solid particles by passing the induced draft blower.
52933. C. A. V. Limited. Engine starting apparatus. Cylindrical rubber member with manually strainable means, axially and rotationally movable pinion engageable with engine, means connected to the member for actuating the pinion and controlling catch engageable with the actuating means.
52934. T. Hindmarch. Improved resilient mounting. (January 1, 1954.) Comprising two elements each constituted by one or more annular rings and resilient means between the rings.
52935. Pittsburgh Plate Glass Company. Improvements in or relating to a method for forming fused bifocal lens blanks. Flowing molten glass of predetermined index of refraction into the countersink within major element of a bifocal lens blank, to form and fuse minor element *in situ* in one operation.
52936. Wellex Jet Services, Inc. Improvements in or relating to well-perforating apparatus. (October 12, 1954.) The apparatus comprises a perforating unit of greater length than the diameter of the tubing in the well, the unit being pivotally connected to a carrier such that in its perpendicular position only one end of the unit extends transversely beyond the tubing.
52937. Imperial Chemical Industries Limited. Improvements in or relating to shaft-position determining apparatus. (November 4, 1953.) Means operated by the rotation of the shaft generates two sets of pulses one out of phase with the other, one of these original sets of

pulses being squared and differentiated providing alternating pulses of opposite sign, the other set providing a muting gate for the squared and differentiated pulses.

52938. Void.

52939. Void.

52940. Void.

52941. Void.

52942. The Wellcome Foundation Limited. Improvements in or relating to the preparation of aminophenoxy alkanes. (October 26, 1953.) Reacting disubstituted aliphatic compound with a disubstituted benzene.

52943. The Wellcome Foundation Limited. Improvements in or relating to the preparation of aminophenoxy alkanes. (October 26, 1953.) Condensing hydroxalkyl halide or alkylene oxide with primary or tertiary amine.

52944. The British Drug Houses Limited. Improvements in or relating to piperazine adipate and compositions containing same. (October 21, 1953.) Mixing an equimolecular quantity of adipic acid with piperazine hydrate in a solvent.

52945. Farmaceutici Italia S. A. New guanidine compounds, their preparation and use as reagents for picric acid. Treating p-amino phenol ether with cyanamide or with a salt of S-alkylisothiurea.

52946. M. A. Kazmi. Improvements in or relating to preserving milk, neera and like perishable liquids. Container containing predetermined volume of liquid is heated to predetermined temperature, containers are closed airtight then cooled.

52947. Creed & Company Limited. Telegraph transmitting apparatus. (March 12, 1954.) Contacts are operated by a plurality of sequence levers in which means are provided to alter the bias.

52948. Societe Anonyme Des Manufactures Des Glaces Et Produits Chimiques De St. Gobain, Chauny & Cirey. Improvements in or relating to electric wall heaters. (September 6, 1954.) Comprising a glass heater plate, a frame for the plate, a bracket behind each side of the plate and means connecting the brackets to the frame.

52949. J. Stone & Company (Deptford) Limited. Improvements relating to the control of air-conditioning apparatus. (October 21, 1953.) A wheatstone

bridge device is provided having balancing means, sensing means and ratio means.

52950. Ciba Limited. Process for the manufacture of steroids. Treating 13-unsubstituted tertiary-17- α hydroxy-D-homo-12:18 bisnor-steroid with an agent capable of eliminating water.

OCTOBER 19.

52951. N. V. De Bataafsche Petroleum Maatschappij. Insecticidal compositions. The composition comprises a polyhalogen-substituted organic compound, a pulverulent solid carrier and an acid neutralizing agent diffused throughout the composition.

52952. Monsanto Chemicals Limited. Improvements relating to polystyrene plastic materials. (October 23, 1953.) Polystyrene containing unvulcanised natural and synthetic rubber and an alkyl benzene having alkyl group of at least 9 carbon atoms.

52953. Jute Industries Limited and J. S. Plenderleath. A rotary electrical switch, and in or for a circular loom, a shuttle having such a switch. Comprising a pulley wheel rotatable by passing yarn, a container carried by the pulley wheel, a contact extending into the container and insulated from the walls and a globule of mercury within the container, movable outwards on rotation of the wheel and inwards to stop a machine on stoppage of said rotation.

52954. D. Napier & Son Limited. Bearing assemblies and the lubrication thereof. (October 26, 1953.) Comprising at least one bearing of the ball or roller type between relatively inner and outer members, sealing means between the two members, means for delivering lubricating oil at a controlled rate.

52955. E. Erb. Improvements relating to means for packaging yarns, threads, strings and like material. Rotating thread-guide lays the thread in rings around conveying members which deposit the thread rings upon a rotating table underneath.

52956. Welx Jet Services, Inc. Improvements in or relating to well-perforating assembly. Elongated carrier with means for lowering it into a well with perforating units and arming means mounted for pivotal movement.

52957. Standard Telephones and Cables Limited. Improvements in or relating

- to synchronising arrangements in electric telegraph systems. (November 3, 1953.) Comprises means controlled by oscillator for regenerating received signals, means for deriving from the received and the regenerated signals.
52958. Ciba Limited. New polymerizable quaternary ammonium compounds and their manufacture and use. Vinyl ethers containing at least one tertiary amino group which is not bound to a hetero atom through a methylene bridge are treated with quaternating agents.
52959. N. E. Butcher, A. J. Mackness and M. M. Sankey. Improvements in or relating to shock absorbing devices. (October 27, 1953.) Flow of hydraulic fluid is controlled by a plug of porous material.
52960. Unilever Limited. Improvements in the control of devices and in particular of dictating machines. (November 10, 1953.) Comprising a control oscillator for injecting into conductors a.c. signals, a remote controller for coupling to them conductors and capable of changing the impedance presented to said signals and a main station controller responsive to the level or change of level of the signals.
52961. Auergesellschaft Aktiengesellschaft. Improvement in or relating to gas heated incandescent bodies. (July 2, 1954.) The fibres of the woven threads are stuck to each other with luminous salts.
- OCTOBER 20.
52962. V. V. Ghatnekar. An apparatus for automatic striking of chords of a stringed musical instrument. Comprising strikers adjustably secured to holders which are in turn adjustably secured to a shafting rotatable by means of motive power.
52963. Anzin Limited. Improvements in or relating to emulsions. (October 20, 1953.) Solid particles are coated with surface active agents and used as the stabilisers for the emulsions.
52964. "Shell" Refining and Marketing Company Limited. Improvements in and relating to motor fuels. (April 2, 1953.) [Divided out of No. 51566; antedated to March 25, 1954.] Containing an anti-knock agent and not more than 1.0 percent of an oil soluble salt of an aromatic or cycloaliphatic carboxylic or sulphonic acid or of a phenol with a metal or Group II or Periodic Table.
52965. N. V. De Bataafsche Petroleum Maatschappij. Preparation of basic polyvalent metal salts of organic acids. Organic acid compound is reacted with a polyvalent metal carbonate which is formed *in situ*.
52966. D. S. Plugs Limited. Improvements in and relating to portable electric lamps or torches. Having an external contact insulated from the casing, an electric circuit when completed from the contact to the casing causing the bulb to be illuminated.
52967. British Insulated Callender's Cables Limited. Improved means for supporting an overhead electric traction conductor (February 23, 1954.) Of the type comprising a clip part and a loop part.
52968. British Insulated Callender's Cables Limited. Improved means for supporting an overhead electric traction conductor. (July 6, 1954.) [Addition to No. 52967.] Of the type comprising a clip part and a loop part.
52969. The Cementation Company Limited. Improvements in or relating to building constructions. (October 21, 1953.) At least two longitudinally extending beams formed from coplanar concrete blocks placed in end to end relationship, are connected in intersecting planes by a knuckle block around which pass two tensioning cables one loop of which passes through the loop of the other.
52970. Vacuumatic Limited and K. Senior. Improvements in or relating to apparatus for counting sheets while retained in a pile. (October 21, 1953.) Comprising a support for a pile of sheets, a rotor having a thin peripheral portion rotatable between adjacent sheets and means actuated by deflection of sheets to operate a counter.
52971. The Upjohn Company. Therapeutic composition and process for preparing the same. Adding neomycin to an aqueous vehicle containing bentonite pectin, and methyl cellulose.
- OCTOBER 21.
52972. Svenska Rotor Maskiner Aktiebolag. Rotary compressors or expanders. A single plate supports rotors having co-operating lands and grooves and the casing provided with an inlet and outlet.
52973. Svenska Rotor Maskiner Aktiebolag. Rotary compressors or

expanders. Male and female rotors are made of mutually different material.

52974. Dennison, Kett and Company Limited. Improvements in or relating to devices for rolling shutters. (June 14, 1954.) Comprising a pair of tracks and a winding shaft for the shutter, electrically operated locking means, a motor control circuit and the means inter-locking the lock releasing means and the motor control circuit.

52975. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a method of preventing a record from being charged electro-statically. Anti-static means transferred to the record surface by periodical contact with them from parts of packing provided with anti-static means.

52976. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to discs intended for making sound carriers. Core layer mainly consists of fibrous material which at pressure providing sound grooves is compressed to 25 per cent to 60 per cent of its initial thickness, the layer of synthetic resin being .25 m.m. thick.

52977. M. A. Katrak. Magnetic tape sound recorder and reproducer. Film after leaving recording head passes over a time lag device comprising of variable distance guide roller before the film is fed to monitoring head, the signal from which head being fed to a preamplifier and then to the recording head.

OCTOBER 22.

52978. W. R. Brooksbank. Improvements in pickers for looms for weaving. The picker being constructed with a skeleton in closed by a moulded covering which can be removed from the skeleton by disintegration.

OCTOBER 23.

52979. S. Knutsson. Pickers for looms. Consisting a body of nylon and being provided at least in one of its end surfaces with a recess for an exchangeable soft insert.

52980. Ruhrchemie Aktiengesellschaft and Lurgi Gesellschaft für Warmetechnik m.b.H. Improvements in the hydrogenation of carbon monoxide with shaped iron catalysts. Wherein the spherical catalyst granules are produced from the dust and undersized granules resulting as waste in the production of string shaped granules.

52981. Electric Furnace Products Company Limited. Process for preparing an acid soluble manganese product from manganese-bearing materials. (April 23, 1954.) Heating to obtain fused mass which is rapidly chilled.

OCTOBER 26.

52982. Allen & Hanburys Limited. Heterocyclic quaternary ammonium salts. (November 12, 1953.) Heating one mole proportion of polymethylene dihalide containing 2-4 carbon atoms and more than two mole proportions of 4-amino-quinoline.

52983. Imperial Chemical Industries Limited. Metallisable azo dyestuffs. (October 30, 1953.) Hydroxy substituted nitrogen containing heterocyclic azodyes are treated with sulphating agents.

52984. Imperial Chemical Industries Limited. Improved esters. (November 18, 1953.) Bis (beta-hydroxy-ethyl) terephthalate is purified by treating an aqueous solution thereof with sodium hyposulphite and isolating the ester from solution.

52985. Dunlop Rubber Company Limited. Improvements in belting. (October 31, 1953.) Belting impregnated with an elastomeric material is formed by weft threads disposed in two or more superimposed layers interwoven with warp threads all of which have the same interlacing pattern and are of uniform length in any length of the fabric containing an integral number of repeats of the pattern.

52986. Ellenberger & Poensgen G.m.b.H. An improved thermal over-current circuit-breaker. In which a spring controlled contact bridge is held in the switched-on position by a bi-metal spring which bends under the action of electric heating by the current not to be exceeded.

52987. The Commonwealth Engineering Company of Ohio. Process for manufacturing citrus fruit juice concentrates. (September 7, 1954.) Fruit, after removal of flavedo and small part of albedo, compressed to expel juice and whole seeds with release of seed oils without contamination by substances in flavedo and seeds; juice after removal of seeds concentrated by step-freeze process removing water only as ice crystals until juice concentrate of desired Brix value is obtained.

52988. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Process for the manufacture of morphinan derivatives. Hydrolysing ether of 1-(p-hydroxybenzyl)-1, 2, 3, 4, 5, 6, 7, 8-octahydroisoquinoline, reacting 1-(p-hydroxybenzyl)-1, 2, 3, 4, 5, 6, 7, 8-octahydroisoquinoline thus formed with alkyl, alkenyl or aralkyl halide and cyclising the product by heating with acid.
52989. Wm. R. Stewart and Sons (Hacklemakers) Limited. Improvements in carding machinery. (October 28, 1953.) The clothing of a roller for a carding machine comprises interlocked staves of light metal or alloy.
52990. Koninklijke Nederlandsche Gist- & Spiritusfabriek N. V. Process for the preparation of antibiotics. Cultivating a strain of streptomyces vendargensis in aqueous nutrient medicine.
52991. Pertrix-Union G.m.b.H. Plate cells for galvanic dry batteries. (Addition to No. 50082.) The electrode and the conductive foil are closely connected together by rolling.
- OCTOBER 27.
52992. H. Bergerhoff. Focal plane shutter for cameras. Comprising leading and following shutter curtains, common driving member for them, impact elements coupling the curtains to the driving member and adjustable stop with which the impact element of the following shutter curtain co-operates in an adjustable yielding manner.
52993. R. Yadav. Improvements in or relating to hot-end junctions in thermocouples. A layer of highly conducting metal is electrolytically deposited at the junctions such that on heating the metal diffuses into the element.
52994. Imperial Chemical Industries Limited. Improvements in or relating to the treatment of textiles. (December 18, 1953.) Treating textile material with silicone oil emulsion.
52995. Societe Anonyme Pour Les Applications De L'Electricite Et Des Gaz Rares—Etablissements Claude-Paz & Silva. Overvoltage arrester with a discharge in a low pressure atmosphere. Contact parts made of iron or nickel or alloy comprising chiefly iron and nickel, inside atmosphere of rare gas containing nitrogen in a proportion of the order of 0.5 per cent.
52996. Arens Controls Limited. Improvements in or relating to drive control and transmission mechanism for actuating a reciprocable and angularly movable member. (November 2, 1953.) Bar longitudinally reciprocable relative to pivoted carriage, cables extending from around idling roller on carriage to means for pulling them and means for preventing pivotal movement of carriage and reciprocation of bar under predetermined conditions.
52997. Gouri Shankar Chatterjee and College of Engineering & Technology. Process for manufacture of salicylic acid and recovery of sodium sulphate as by-product. Using caustic soda in less than stoichiometric quantity for preparation of sodium phenolate and reacting said phenolate with carbon dioxide stepwise under medium pressure and temperature.
52998. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to electrode systems comprising a semi-conductive body and at least one alloy electrode. Comprising at least one unhomogeneous electrode wire is secured to a semi-conducting body, the wire being made from two metals having different melting points.
52999. Universal Winding Company. Strand winding machine. Comprising a rotatable spindle a yarn guide, means for separating spindle and yarn guide, means for modifying the relative movement between spindle and guide.
53000. David Brown Tractors (Engineering) Limited. An improved tractor-implement linkage arrangement. Two similar assemblies mounted on adjustable brackets each supporting adjustable and angularly movable vertical pillars, ends of which are pivotally connected to ends of two rearwardly extending members, rear ends of which are connected by vertical link carrying angularly adjustable member clamped to implement.
53001. David Brown Tractors (Engineering) Limited. New or improved means for raising and lowering implements carried by agricultural tractors. Closed ends swingably mounted cylinders with rams pivoted to tractor frame connected to means for raising and lowering two linkages and to valve systems; actuation of appropriate one of manually operable valve actuating means, compressed air admitted to or exhausted from cylinder concerned.
53002. Standard Telephones and Cables Limited. Improvements in or relating

- to inductive electrical windings. (December 30, 1953.) Inductive winding formed by printing conductive track on one surface of a flat insulating carrier and folding it through 180° along a line crossed by the track.
53003. Standard Telephones and Cables Limited. Improvements in or relating to electrical circuits using multi-gap cold cathode gas-filled tubes. Having an array of inter-electrode gaps and in which applied electric pulses caused the discharge to be moved from gap to gap.
53004. Creed & Company Limited. Facsimile recorders. Comprises carriage means for traversing, advanced stylus with holding means and stylus positioning stop.
53005. Creed & Company Limited. Facsimile transmitter. Comprises a rotatable drum, scanning means, output circuit and blanking means.
53006. J. A. Kavanagh and R. J. Marcy. Shoe shaping counter. (December 21, 1953.) Provided with an upright wall and an integral heel seat flange with one or more notches and a smooth curve joining the sides of each notch at its apex.
53007. Ciba Limited. Manufacture and use of certain polymerisation products. Polymerising an ester or amide of at least copolymerisable acid containing in the ester or amide portion at least one quaternary ammonium group which is not bound to a hetero-atom through methylene bridge and at least another polymerisable compound.
53008. H. Faigle. Method of and apparatus for the extrusion of synthetic plastic sections of any desired length. Synthetic plastic melt is extruded through in extrusion nozzle.
53009. G. Vuagnat. Process for the production of a copal for technical purposes. Raw copal is dissolved in solvent, the solution treated with a reducing agent, filtered and solvent removed.
- OCTOBER 28.
53010. N. V. De Bataafsche Petroleum Maatschappij. Lubricating composition. The composition comprises a major portion of lubricating oil and a minor proportion of a copolymer of a heterocyclic base with a non-heterocyclic unsaturated organic compound.
53011. The French Oil Mill Machinery Company. Improvements in or relating to desolventizer and toaster. The solids and the entrained solvents are passed through a series of connected closed chambers, live steam is introduced in at least one of the chambers below the layer of stirred solids and the vapours are passed through layers in the upper chambers and the solvent vapour from the first chamber is condensed and recovered.
53012. American Cyanamid Company. Improvements relating to the treatment of soil and compositions therefor. By incorporating with the soil a copolymerizable composition comprising an acrylic acid derivative and an alkylidene diacrylamide.
53013. The General Electric Company Limited. Improvements in or relating to circuits of the kind for supplying electric current pulses having constant peak amplitude. (November 4, 1953.) Comprising path on which is supplied positivegoing pulses to control grid of thermionic valve, means to maintain a resistance in the valve cathode circuit at the end remote from cathode at a voltage negative with respect to the voltage on the control grid and means to provide a path through the resistor by-passing the valve when voltage at the resistor's end nearest the valve cathode falls below a pre-determined value.
53014. International Business Machines Corporation. Memory systems and cathode ray switch tubes for use therein. (June 3, 1954.) The tube comprising means for producing an electron beam, a control grid, means for deflecting the beam to impinge upon any of a plurality of target electrodes adapted to emit secondary electrons which are collected by a collector electrode.
53015. Imperial Chemical Industries Limited. Improvements in or relating to titanium base alloys. (November 2, 1953.) Alpha titanium base alloys wherein one or more β -stabilising elements having a limited solubility in the α -phase is incorporated in the alloy in amount upto the solubility limit.
53016. Winget Limited. Apparatus for use in loading or depositing materials. (November 27, 1953.) The apparatus comprises a track on which a hopper is guided, and means carried by hopper which guide the hopper in its movements, the means during the upward

movement of the hopper being caused to approach the pivotal axis about which the hopper is tilted, to cause the hopper to tilt.

53017. Tecalemit Limited. Improved lubricant receiving nipple. (December 10, 1953.) Comprising a bore for lubricant passage having a non-returning valve at inlet engaging spring loaded thrust member longitudinally movable therein to make sealing engagement with valve seat.

53018. Horizons. Titanium Corporation. Removal of adhering salts from titanium, vanadium, tantalum and niobium metal by leaching with an aqueous medium. By incorporating a per-oxygen oxidising compound in the aqueous medium used for leaching.

53019. Societe Du Vacuum Concrete. Improvements in or relating to reinforced concrete arches. Having intrados and extrados of identical curvatures.

OCTOBER 29.

53020. K. B. Sodha. Improvements in or relating to photographic cameras. Having plate holder on which are provided guides for moving plate container, means for shifting the plate container in stages, a shutter and means whereby the shutter is automatically operated at the end of each stage of the shifting of plate container only when an exposed part of the plate has been moved away from the field of exposure.

53021. Philipp Holzmann Aktiengesellschaft. Improvements in or relating to the anchoring of stressing wires for prestressed concrete. Stressing wires arranged in several layers and separated by plates are held between clamping plates by compressive forces and pressed together.

53022. Imperial Chemical Industries Limited. Improvements in or relating to the treatment of textile materials. (December 18, 1953.) Treating the textile material with an emulsion of a silicone oil, heating the thus treated material to convert the said oil to a solid condition.

53023. Void.

OCTOBER 30.

53024. Void.

53025. I. Plesnik. Tube surge arrester for protection of electrical equipment. Spark gaps are distributed in several

levels, the electrodes interposed on either sides of the spark gaps having rounded heads like calottes and being protected by an encircling insulated tube.

NOVEMBER 1.

53026. Void.

53027. Void.

53028. R. M. Herbst. Substituted tetrazolines. By condensing a 5-aminotetrazole compound with an aralkyl halide.

53029. D. Napier & Son Limited. Transmission mechanism including bevel pinions. (November 9, 1953.) Bevel pinions provided with thrust surfaces arranged to engage one another thus limiting the movement of the bevel gear towards its cone centre caused by rotation and shape of teeth thus maintaining correct mesh of the teeth.

53030. Scientific Oil Compounding Company, Inc. Fungicidal and insecticidal compounds and compositions formed of complex double salts. Heating complex double salt of resin amine complex and water-insoluble carboxylic acid metal soap.

53031. British Insulated Callender's Construction Company Limited. Improved construction of cross-arms of poles and towers for overhead electric lines. Consisting of an arm or arms, made of resin bonded glass fibres incorporating at one end means for attachment to a pole and to the other end means for supporting an overhead line conductor.

53032. A. L. Collins. Improvements in or relating to oscillating and like mechanism for electric fans. Control member mechanically controlling operation of turning mechanisms, driven by motor and operative between the head and the base, mounted on the base remains stationary when head is turning.

53033. A. Dinger. A covering device for food or the like. Comprising a frame-work consisting of spokes to support a covering fabric ribs to hold the spokes and means for opening and collapsing the frame work on a standard.

53034. North American Rayon Corporation. Improvements in process and apparatus for the continuous production of synthetic thread. Simultaneously spinning a plurality of multi-filament threads, moving said threads through liquid treating zones, delivering treated threads to a drying zone.

53035. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brünning. Manufacture of Diazo-dyestuffs insoluble in water. (December 7, 1953.) (Addition to No. 50429.) Coupling tetrazo-compound of 4-4'-diamino-3, 3'-dichlorophenyl with acetoacetylaminobenzene, the benzene ring containing either two methoxy or ethoxy groups and a chlorine atom or two methoxy or ethoxy groups as substituents.

53036. Nottaris & Wanger. Improvements in or relating to photographic copying devices. Having bearing plate for photomaterial, a flexible transparent lid above it and an exhausting device for air suction off the space between lid and the plate.

NOVEMBER 2.

53037. D. Napier & Son Limited. Improvements in or relating to axial flow machines. (December 2, 1953.) Sealing means mounted on the inner part of the interstage body engages a rotary sealing member mounted on the rotor shaft.

53038. Hordern, Mason & Edwards Limited. Improvements relating to means for controlling the rate of operation of power presses or other machine tools. (November 3, 1953.) Power press provided with a clutch and speed controlling gear mechanism.

53039. Bowaters Development and Research Limited. Anti-foam process in papermaking. (November 6, 1953.) By mixing an anti-foaming agent with water and spraying it upon the stock while on the wire of the paper machine to eliminate air bells.

53040. The English Electric Company Limited. Improvements relating to mine winders. (November 10, 1953.) Comprises in combination control means to cut off power to winding engine when ascending conveyance reached a predetermined position and to cause rapid application of the brakes, means for automatically and momentarily releasing the brakes.

53041. The Firestone Tire and Rubber Company. Improvements in or relating to wheel construction. A body is secured to the hub on disc portion which is split in radial direction.

53042. Void.

53043. Union Carbide and Carbon Corporation. Improved anodes for primary galvanic cells. (September 22, 1954.) Consisting of finely divided

metal and a binder, the binder being a thermoplastic resin and constituting a substantially continuous matrix throughout the anode.

53044. E. K. Cole Limited. An improved combined optical and magnetic sound translating head assembly for cinematograph projection. (November 14, 1953.) Comprising container part of which constituting a film guide and within which are housed magnetic sound translating head and optical sound track scanning apparatus the outer wall having apertures by means of which sound record film over said film guide may be brought into close proximity with said head and apparatus and an electric switch means bringing into operation either the said head or apparatus.

53045. Void.

53046. Void.

53047. Ciba Limited. New pure alkaloid, acid addition salts thereof, and process for making same. Deserpidine is isolated by known methods e.g., salt formation, disintegration by chromatography or crystallisation from the mother liquors obtainable after reserpine-crystallisation, starting from Rauwolfia plants.

53048. Void.

53049. Void.

53050. The Mining Engineering Company Limited. Scraper chain conveyor structures. (November 2, 1953.) The structure is made from a series of separable upper and lower trough sections which can be locked together end to end and has the upper trough sections at least butting together and independent plates extending transversely across the tops of the lower troughs under the joints between the upper troughs to form spillage seals.

NOVEMBER 3.

53051. Void.

53052. Void.

53053. D. Napier & Son Limited. Improvements in or relating to combustion turbines. (November 20, 1953.) Cooling fluid admitted to inner circumferential parts of annular space between a rotor disc and stationary annular body arranged adjacent to one face of the rotor, disc and having a series of spiral fins flows in spiral path, over rotor disc during its passage outwards.

53054. A. Reyrolle & Company Limited. Improvements relating to voltage transformer units for high voltage switch-gear. (November 13, 1953.) High voltage windings and their connections to the high voltage terminals are embedded in a single insulating block and at least one high voltage terminal insulating bushing per phase is moulded integrally with the block with a re-entrant orifice.
53055. Campagne Francaise Des Matieres Colorantes. Improvements in colouring compositions and the printing of cellulosic textile materials therewith. (October 26, 1954.) [Addition to No. 51599.] Diazoamino derivative derived from N-(2-carboxy-4, 6-dichlorophenyl) glycine, N-(2-carboxy-4-bromophenyl) glycine or 5-bromo-2-hydroxyethylaminobenzoic acid is used for printing.
53056. British Nylon Spinners Limited. Improvements relating to the production of slivers of staple fibres from tows of continuous filaments. Presenting leading end portions of the tow continuously from the periphery of a rotating means to a cutting means placed adjacent to the periphery of a rotating member having a series of pins on one face thereof.
53057. J. C. Bennett. Improvements in and relating to wire crates. Comprising upper, lower and one or more interconnected by vertical wire rods, the vertical rods near their upper ends are inwardly crimped to form support for the lower frame.
53058. The Asiatic Oxygen & Acetylene Co. Ltd. Control valves for use in conjunction with cylinders containing gases. Providing a safety valve within a by-passage comprising plug having passage therein filled with bursting substance to withstand predetermined pressure.
53059. F. Hoffmann-La Roche & Co. Aktiengesellschaft. Stable vitamin A Compositions. Using N, N'-diphenyl-p-phenylene diamine as a stabilizer of vitamin A composition.
- NOVEMBER 4.
53060. Void.
53061. A. Reyrolle & Company Limited. Improvements relating to voltage transformer units for high voltage switch-gear. (November 13, 1953.) High voltage phase windings and the neutral connection between them and the connections from the windings to the high voltage terminals are all embedded in a single moulded insulating block.
53062. Ateliers De La Motobecane. Combination of a centrifugal clutch, and the expanding pulley of an automatic variable-speed device, for example in autocycles. Clutch and pulley mounted in juxtaposition on a shaft and a wall forming a abutment of the centrifugal balls.
53063. Norsk Hydro-Elektrisk Kvælstofaktieselskab. Process for crystallization of nitrates from nitric acid solutions of calcium phosphate. Solution is cooled in batches and crystallization in each charge is initiated by adding seed crystals of calcium nitrate when the temperature of solution is between 2 and 10°C below saturation temperature.
53064. Aktiebolaget Bofors. Method for crystallizing aromatic nitro compounds in nitric acid. In the crystallisation process, the acid is used in a concentration of 55 to 68% and in a quantity that is insufficient for complete dissolution of the nitro product.
53065. Coldiar Limited. Improvements in or relating to door latches. (November 12, 1953.) Comprising pivoted latching member swinging over dead centre position operable by means operable by door handle and means for engaging striker on door jamb on closing.
53066. Fell Oevelopments Limited. Internal combustion engine power units. (November 13, 1953.) [Addition to No. 38915.] There is provided a variable speed gear, having at least two gear ratios, between the planet carrier of the differential gear and the final drive to the mechanism to be driven by the power unit.
53067. Chas. Pfizer, & Co., Inc. A process for the production of tetracycline by fermentation. By Cultivating a tetracycline producing strain of genus streptomyces in a nutrient medium under submerged aerobic conditions.
53068. Union Carbide and Carbon Corporation. Improved duplex electrodes. (August 12, 1954.) Comprising pressure-molded thermoplastic resinous matrix, one portion thereof containing comminuted anodic material and another portion thereof containing comminuted cathodic material.

53069. Perfogit Societa per Azioni. Process and apparatus for separating and purifying condensation products. Condensation space bottom being at temperature lower than remaining portions to separate water impurities as upper layer.

53070. Void.

53071. D. Sebel & Company Limited. Improvements in or relating to stacking chairs and the like. (November 5, 1953.) Comprising a frame supporting a seat and a back rest the frame being formed of solely two members releasably secured respectively one to another above the seat and to the seat.

53072. Ciba Limited. Pharmaceutical preparations containing new esters. [Divided out of No. 49633; ante-dated to May 25, 1953.] The preparations comprise esters of 1:4-dihydro-4-oxo-14-phenyl-6-lower alkyl-pyridazine-3-carboxylic acids unsubstituted in the 5-position, with a pharmaceutical carrier.

NOVEMBER 6.

53073. Void.

53074. Void.

53075. R. Torisu. Improvements in or relating to cross-bar type switches. Magnets, contact spring groups and terminals mounted on self secured to front of frame for easy wiring at back, selecting magnets with common yoke arranged in pairs in two rows at left with armature of each pair secured to yoke, holding magnets with common yoke arranged in horizontal row with armatures on top of magnet cores against edge of yoke.

53076. Deutsche Tafelgas Aktiengesellschaft Detag. Method and apparatus for reducing the drawing waves in a glass sheet continuously drawn from molten glass. Introducing preheated gas of 250°C into the drawing chamber and making it flow on each side, transversely to the direction of movement of glass sheet and across the whole width of glass sheet to reduce waviness.

53077. International Business Machines Corporation. Improvements in memory systems. (June 3, 1954.) Comprising a ferro electric capacitor capable of assuming a multiplicity of stable polarization states, means for polarizing the same to one of said states, applying information representing quantified pulses to it and means for producing the information thus stored.

53078. William Kenyon & Platts (Narrow Fabrics) Limited and E. Fielding. Improved edge guiding and supporting means for sliding members such as windows. (November 6, 1953.) It includes a channel lined with narrow woven fabric, which has a longitudinal reinforcement disposed at the base of the channel.

53079. Imperial Chemical Industries Limited. Process for the manufacture of diethyl dithiol esters. (December 7, 1953.) Reacting isophthalyl chloride with ethyl mercaptan.

NOVEMBER 8.

53080. Automatic Telephone and Electric Company Limited. Improvements in regenerative modulators. (November 13, 1953.) Comprises a frequency mixer, harmonic generator and filters.

53081. Pending.

53082. Pirelli-General Cable Works Limited. Improvements in or relating to pipe couplings. (December 10, 1953.) Employing a winding of tape for the bush wherein the tape is provided with indentations whereby, on coalition of the convolutions voids remain in the bush as finally formed.

53083. Bowaters Development and Research Limited. Clamping ring closure. (November 16, 1953.) Comprising two arms, with notches and holes adapted to be swung about a common axis, the notches engaging a projection, while sealing wire passes through registering holes.

53084. J. Dungler. Process for the treatment of fabrics, paper, cardboard and the like materials with corrosive gasiform fluids, chiefly adapted for textile paper, card board and the like industries. Wherein the material is impregnated with treating agents at a low temperature, and then subjected to a raised temperature inside a dry atmosphere.

53085. A. B. Darvill. Improvements in or relating to drawbar attachments. (August 3, 1954.) Each of the two linkage arms is pivotally attached at one end to the drawing vehicle and at the other end to the towed vehicle, the arms crossing each other in X-fashion.

53086. The English Electric Company Limited. Improvements in and relating to the control of feathering runner vanes of hydraulic turbines and pumps. Wherein transmission means are connected to part of servo-motor rotatable

relative to runner, which transmit motion to return motion rod.

53087. Imperial Chemical Industries Limited. Improvements in or relating to shaft-position determining apparatus. (November 30, 1953.) When the shaft is rotated a first pulse emitted in a first circuit and a second pulse emitted in a second circuit, the second pulse beginning before the first pulse ends, and pulses are fed to a polycathode gas-filled tube counter, the first pulses being fed to one guide of the counter and the second pulses being fed to the other guide of the counter.

53088. J. D. Edal Behram. Improvements in or relating to cigarette packets. Has a strip folded over cigarettes having thumb tale on one end pasted to slide or I-shaped partition on other end.

53089. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to hot gas reciprocating apparatus. Total length L of ducts in cooler is at least $20 M^{0.19} dh$ and at the most $55 M^{0.19} dh$ where M is the molecular weight of the gas in the apparatus and dh is the wider hydraulic cross diameter of the gas ducts in cooler.

53090. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to cold-gas refrigerators. Length L of regenerator in cms. between hot and cold terminal surfaces such that $\frac{L}{dh} = C.P.^{0.23}$ wherein $P =$, $dh =$ hydraulic diameter of regenerator wire material in cms., $t =$ ratio of absolute temperatures of cooler and freezer, $P_{max} =$ maximum pressure in cycle in dynes/cm², $n =$ engine speed, $\eta =$ dynamic viscosity of gas at regenerator mean temperature in poise and $C = 3.5-10.5$ preferably $4.3-8.6$.

53091. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to cold-gas refrigerators. Comprising a space of low temperature and a space of high temperature connected through a freezer, a regenerator and a cooler, and gas in the engine, the ratio between the stroke volumes of the space of high and low temperatures being at least $1+0.025 t$, preferably $1+0.10 t$ and the most t , preferably $0.8 t$, t being the quotient of absolute temperatures of cooler and freezer.

53092. Compagnie Pour La Fabrication Des Compteurs Et Materiel D'Usines A Gaz. Improvements in or relating to

fluid turbine meters. In a casing a rotor actuating an indicating mechanism comprises two concentric helices of opposite rotation separated by a tubular wall.

53093. Farbenfabriken Bayer Aktiengesellschaft. Process for decolourising and purifying liquids. (September 17, 1954.) The liquid is treated with active carbon having a specific electrical resistance of 5 to 30,000 Ω /mm²/m⁻¹.

53094. Void.

53095. K. L. Lanninger. Angularly tiltable, rapidly adjustable tube coupling. Comprising two coupling halves, locked on tube ends of inside diameter greater than outside diameter of tubes, annular recess in inside wall of each coupling half inter-locking ring shaped protuberance on each tube and sealing sleeve between these.

NOVEMBER 9.

53096. Monsanto Chemicals Limited. Improvements relating to biologically active compositions. (November 12, 1953.) An aqueous dispersion of plasticised polystyrene is mixed with an aqueous dispersion or solution of a biologically active ingredient.

53097. The English Electric Company Limited. Improvements in and relating to feathering runner vanes for hydraulic turbines and pumps. (November 13, 1953.) Bearing surfaces for the trunnions of the runner vanes are made frusto-conical, tapering inwardly at least in the outer bearing.

53098. The English Electric Company Limited. Improvements in and relating to discharge regulators for hydraulic plants. (November 13, 1953.) A number of radial butterfly valves on the upstream side which in open position are in alignment with radial ribs.

53099. J. Bolton and D. E. Hennessey. Improvements relating to the construction of space decks and components thereof. (November 12, 1953.) A planar compression member, a junction unit and a set of struts connected between the junction unit and the compression member.

53100. Allen & Hanburys Limited. Process for the manufacture of penicillin salts of ω' -dibenzylamino ethers. (November 18, 1953.) Reacting $C_6H_5CH_2NH(CH_2)_nO-(CH_2)_nNHCH_2C_6H_5$ with penicillin or salt of penicillin, where n is 2-5.

53101. Ricardo & Co. Engineers (1927) Limited. Improvements in detachable cylinder head constructions for liquid-cooled internal combustion engines. (November 26, 1953.) Inner wall engaging face of cylinder block, and outer-wall forming cooling water chamber, buttress wall integral with inner wall and lying closely around cylinder chamber, cooling water inlets and transfer passages for outflow of streams of cooling water through space surrounded by buttress wall.

53102. K. Abildgaard-Elling. A method for the production of anilides. (November 10, 1953.) A mixed anhydride of dialkylamino carboxylic acid and an aromatic acid is reacted with a substituted aromatic amine.

53103. Pertrix-Union G.m.b.H. Plate cells for galvanic dry batteries. [Addition to No. 50082.] The covering wider casing is provided on the innerside facing the polariser.

NOVEMBER 10.

53104. Imperial Chemical Industries Limited. Improvements in or relating to charges for the generation of power gases. (January 6, 1954.) Comprising a main charge and at least one smaller compensating charge of a colloided nitrocellulose composition.

53105. Amal Limited. Carburettors for internal combustion engines. (November 19, 1953.) Comprising in combination a main body portion having an air intake passage and a metering needle movable with a piston type throttle valve to control the amount of fuel in accordance with the amount of air passing and a separate primary intake passage.

53106. Bowaters Development and Research Limited. A container closed at one end by a closure element and method of applying the closure element to a container. A metal hoop is embraced in a sandwiched flange formed by a disc and an infolded portion of the container.

53107. Allen and Hanburys Limited. Improvements relating to operation tables and chairs. (November 23, 1953.) Comprises a pillar, a yoke on said pillar, a table top, a gearing operable to tilt the yoke and a further gearing operable to tilt the table top.

53108. American Cyanamid Company. Improvements relating to storage stable

antibiotic salts. (December 11, 1953.) By suspending in a solvent a compound which liberates a bivalent tetracycline group antibiotic ion and a compound of metal calcium and magnesium at a pH 8—10.

NOVEMBER 11.

53109. Radio Corporation of America. Magnetic sound recording apparatus. Including compensating arrangement comprising apparatus for deriving control signal representative of the sensitivity of the magnetic medium and circuit means responsive to the control signal for modifying the information signals and for the operation of signal recording apparatus to compensate for variations in the sensitivity of the medium.

53110. Standard Telephones and Cables Limited. Improvements in or relating to radio communication systems. (November 12, 1953.) For conveying the signals of one or more channels from a transmitting station to a receiving station, comprising two radio links and means for automatically switching over from one link to the other which takes account of both the noise conditions and the received signal level.

53111. R. P. J. Short. Improvements in or relating to sawing machines. Comprising two saw elements, a housing for each or both saw elements, a driving device for the saw elements, a slideway adapted for co-operation with said housing.

53112. The Singer Manufacturing Company. Stitch-length indicator for sewing machines. Providing an operating lever movable in a slotted gate having locking means engageable with gate to retain the lever in any selected setting.

53113. Wilhelm Geidner Metallwarenfabrik. A tube for the wet treatment of yarn. [Addition to No. 46158.] Wherein the depressions of the holes are partially connected by intermediate depressions towards the interior of the sleeve.

NOVEMBER 12.

53114. Void.

53115. British Insulated Callender's Cables Limited. Improved means for forming the edges of metal strip. (November 27, 1953.) Effecting a local corrugating of the edges of a metal strip by two rings of rods inclined at a small angle to each other and rotatable in synchronism and the rods of one ring

running in spaces between the rods of the other ring in the region.

53116. Piarotto Man-Nen-Hitsu Kabushiki-Kaisha (in English Pilot Pen & Co., Ltd.). Fountain-pen. A combination of an ink sack, main cylinder, and an auxiliary short cylinder.

53117. Westinghouse Brake and Signal Company Limited. Improvements relating to automatic control valves for variable load braking apparatus for vehicles (December 4, 1953.) Wherein a valve device is provided for automatically controlling and maintaining the degree of vacuum in the upper chamber in accordance with the load on the vehicle.

53118. Heinrich Koppers G.m.b.H. Improvements relating to regeneratively-heated ovens. (September 20, 1954.) Comprising plurality of ovens heated by combustion of rich gas and air and/or waste gas in vertical flues in the walls between the oven.

53119. Dunlop Rubber Company Limited. Improvements in or relating to anti-skid devices for vehicle tyres, boots shoes or the like. A base pad has an insert bonded to it with pointed portions of hard material.

53120. Allied Laboratories, Inc. Process of preparing a composition for combating trichuris infection in mammals. A dosage unit containing a mixture of not less than about 30 mg. of 3-methyl-1-pentyn-3 yl acid phthalate or salts thereof and a pharmaceutical carrier, is made.

53121. Standard Telephones and Cables Limited. Improvements in or relating to waveguide systems for microwave antenna heads. (November 13, 1953.) Microwave antenna head comprising a closed waveguide loop and waveguide extensions from said loop connected respectively to an antenna and to a transmitting or receiving element.

53122. Ciba Limited. New process for the preparation of amines. Phthalimides are reduced at a cathodic reference potential of at least—1.0 volts vs. a saturated calomel electrode using a mixture of water lower aliphatic carboxylic acid and a strong inorganic acid and cathode of high over voltage.

NOVEMBER 13.

53123 Abbott Laboratories. Improvements in or relating to dry sweetening compositions. Comprising the combination of 2 parts of sodium cyclamate or

calcium cyclamate with 1 part of Saccharin.

53124. Abott Laboratories. Method of preparing stable solutions of barbituric acid type compositions. [Addition to No. 50877.] [Divided out of No. 50877; ante-dated to June 6, 1954.] Forming a non-aqueous solution of a parenterally acceptable water miscible alcoholic organic solvent and a water miscible alkaline reagent and dissolving in said solution a barbituric acid type compound.

53125. "Shell" Research Limited. Method of producing a dispersion of a solid inorganic compound in a fuel oil. (November 16, 1953.) Mixing solid inorganic compound with a fuel oil in presence of a surface active agent.

53126. Bowaters Development and Research Limited. Improvements in drums. (November 16, 1953.) Top of a fibre board drum body roller over upon itself together with a metal hoop to get a reinforced beaded rim.

53127. Bowaters Development and Research Limited. Liquid extracting apparatus. (November 18, 1953.) Including a perforated carrier for wet material means to provide a suction zone, means for causing said carrier to pass over and beyond said suction zone, and a pressure equalizing passage.

53128. The General Electric Company Limited. Improvements in or relating to thermoelectric devices. (April 28, 1954.) Comprises a thermo-couple of which one is an extrinsic semi conductor.

NOVEMBER 15.

53129. Void.

53130. Schering A. G. Manufacture of esters of 17- α -hydroxy progesterone with a protracted progestational activity. 17- α -hydroxy-progesterone is converted by known methods into an ester with an aliphatic carboxylic acid and of 4—7 carbon atoms.

53131. Imperial Chemical Industries Limited. New azo dyestuffs. (November 25, 1953.) Diazotising amino-diazo compound and coupling the diazo compound thus formed with 8-hydroxy quinoline.

53132. The English Electric Company Limited. Improvements in and relating to electric switches. (November 27, 1953.) Switch is provided with a boss which is detachably secured to a wall

- of the casing so that a driving shaft projects through an aperture.
53133. Coal Industry (Patents) Limited. Improvements in and relating to the manufacture of coal briquettes. A mass of particles under-pressure is caused to undergo angular shear strain of such magnitude and distribution as to produce a briquette of high strength.
53134. Deutsche Gold-Und Silber-Scheideanstalt Vormals Roessler. A process of bleaching cellulose, textile fibres and like materials. Carrying the bleaching in an apparatus of which the surface exposed to the bleaching solution consists of a polymer or co-polymer of an acrylic acid compound.
53135. Deutsche Gold-Und Silber-Scheideanstalt Vormals Roessler. A process of bleaching cellulose, cellulosic textile and like material. Carrying the bleaching in an apparatus of which the surface exposed to the bleaching solution consists of titanium or an alloy containing titanium as the predominant component.
53136. Shyamlal. Improvements in or relating to gravity dams. Material is removed from triangular downstream portion at repeated intervals.
53137. General Steel Castings Corporation. Improvements in or relating to a railway vehicle truck. Comprising a wheeled axle, a truck frame supported thereon, a bolster supported on the frame and wherein there are three points of support for a vehicle body on the truck.
53138. Harry Ferguson Research Limited. Improvements in or relating to vehicle transmissions. Intermediate differential gear divides power between output members respectively driving front and rear road wheels.
53139. Harry Ferguson Research Limited. Improvements in or relating to engine-driven vehicles. Two lateral output drive shafts are coupled to half shafts incorporated in associated half axle assemblies and one fore and aft output drive shaft coupled to the fore and aft transmission shafting.
53140. Ciba Limited. Process for decatizing wool by the wet method. Wool dyed from a weakly alkaline with a complex metal compound of a monoazo-dyestuff free from sulfonic acid groups being heated in an aqueous bath.
53141. Aktiobolaget Innovator. Improvements in locking devices for nuts and screws. Wherein spring washer has axial height larger than its radial width and its free ends are bent away from each other to form protruding gripping edges.
53142. Deering Milliken Research Corporation. Method and apparatus for crimping thermoplastic yarns. (August 12, 1954.) Yarn is curled when it is in tensionless condition.
53143. Cognate to appln. No. 52534.

NOVEMBER 16.

53144. E. H. Watts. Improvements in cargo-carrying ships. Combined with a pair of hatch opening one above the other on a pair of decks, there is a hatch feeder structure of vertical members between decks around the hatch opening and each providing two channel-section slots, and a series of superimposed partition members in corrugated form with half-corrugations at the edges, extending between the vertical members in their slots.
53145. J. R. Geigy A.-G. Process for the production of bistriazinyl-amino stilbene compounds and the application of such compounds to the optical brightening of cellulose materials. Reacting 4,4'-bis-[4,6-dihalo-1,3,5-triazinyl-(2)-amino] stilbene-2,2'-disulphonic acid with 2 mols of a primary aromatic amine of the benzene series and with 2 mols of a secondary alkylethanolamine.
53146. The Osaka Aluminium Works Ltd. An improvement in sliver cans. Comprising a drum made of light metal alloy plate having a bottom fixed, and the edges of the plate in abutting contact and butt-welded.
53147. G. N. R. D. Patent Holdings Limited. Improvements in or relating to the preparation of steroid substances. (November 25, 1953.) 3-hydroxy-11-ketosteroids and esters thereof are prepared by reacting a 3:12-dihydroxy-11-keto steroid-diester with an alkali or alkaline-earth metal in liquid ammonia.
53148. The Gas Council. Improvements in or relating to heating gases and vapours. (November 24, 1953.) Passing gases in reverse direction to that of heating gases through three beds of heat storage material in turn and then passing air for use in producing heating gases.
53149. Union Carbide and Carbon Corporation. Apparatus for vaporizing volatile liquids. (August 20, 1954.)

Wherein the inlet manifold is divided into separate sections, each connected to a separate group of conduits, and an automatic valve means to transfer the flow of volatile liquid from one section to another.

53150. Revertex Limited. Improvements in or relating to the concentration of aqueous rubber dispersions. (December 24, 1953.) Aqueous dispersion is frozen between -5 and -20°C and separated into all rubber fraction and all ice fraction.

53151. James Mackie & Sons Limited. Improvements in and relating to spinning and twisting machines. (November 17, 1953.) Having a notch in the upper edge of the base of the bobbin, an annular space below the notch, a stationary yarn guide and retaining means.

53152. Atlantic Investment Company (Montevideo) S. A. Improvements in or relating to burners. Comprising in combination an elongated tube with a combustible fluid under pressure and having a top open end a nozzle means covering the top open end of the tube and being fixed to the latter for directing the combustible fluid upwardly from the tube.

NOVEMBER 17.

53153. Dr. K. Ziegler. Improvements in the polymerization of ethylene and in catalysts therefor. Comprises in contacting gaseous ethylene with catalyst formed by mixing an aluminium trialkyl with a compound of metal from group IVB, VB and VIB of periodic system.

53154. E. B. Nichols. Improved feed devices for fountain pens and the like. Combination of tubular-section and feed component embodying an inwardly-directed helically-grooved portion with an outwardly directed extension having lengthwise liquid and air flow grooves.

53155. Aerosol Corporation T. R. Improvements in or relating to apparatus for the atomization of liquids. Casing of the atomiser has an air inlet, which is connected to a separately driven air blower.

53156. N. V. Ontwikkelingmaatschappij Multinorm. Agricultural equipment for working soil. Soil working equipment having scooping tools radially arranged around a common shaft and provided with a device which moves it over the soil.

53157. Koninklijke Nederlandsche Gist & Spiritusfabriek N. V. Process for the preparation of an antibiotic with the aid of actinomycetes of the streptomyces genus and antibiotic product produced thereby. *Streptomyces bottropensis* is cultivated in an aqueous nutrient medium and the B-mycin antibiotic produced is recovered.

NOVEMBER 18.

53158. N. V. De Bataafsche Petroleum Maatschappij. Process and vortex tube for producing cold gases. Vortex tube which at least at the place where on account of its rotary motion part of the gas introduced into the tube becomes colder and part becomes warmer—is empty, and that the tube is intensively cooled by cooling liquid.

53159. The Dux Chemical Solutions Company Limited. Rot-proofing cellulosic materials. Firstly impregnating the textile material with aqueous ammonium naphenate and then impregnating with an aqueous ammoniacal solution of cuperammonium hydroxide.

53160. D. Napier & Son Limited. Electric spark generators. (November 19, 1953.) Comprises means for ionising the spark gap and means for passing a high voltage across the ionised gap.

53161. Strichting Reacto Centrum Nederland. Process for carrying out nuclear fission reactions. The design and dimensions of the thermal reactor together with the initial proportion between quantities of moderator and fissile material are so selected that the susceptibility of the reactivity of the fission reaction to the fluctuation in the proportion between the quantities of moderator and fissile material will be minimal.

53162. The Monotype Corporation Limited. Improvements in or relating to moulds for casting single-type bodies. The movements of the cut-off blade are determined by pneumatic devices and its actuation is also affected by pneumatic devices.

53163. N. V. Philips' Gloeilampenfabrieken. Improvements in or relating to a refrigerator comprising a refrigerator comprising a space having a lower temperature and a space having a higher temperature. The mean speed of the gas in the empty regenerator depends on the sound speed in the gas

The speed of refrigerator and the hydraulic diameter of wire material in the regenerator.

53164. R. Schobelt. A method for producing moulds. Producing a first unit and a second unit of complementary moulds of the first intermediate moulds and then allowing them to harden and finally withdrawing each unit and drying.

53165. O. Hinze. Upper chord locking device for falsework carriers. One or more projections on interface of one element bent towards boundary plane of upper chord; interface of upper chord end of adjacent element formed with abutments shaped corresponding to the projections to provide bearings surfaces therefor.

53166. Libbey-Owners-Ford Glass Company. Electrically conductive windshield for automobiles and for the like purposes. Comprising glass sheet having central and bent and portions, a transparent electrically conductive film on the central portion of the sheet and terminating inwardly of the outer ends of the end portions and electrodes arranged along opposite margins of the filmed surface and in contact with said film.

53167. M. Chander. Improvements in or relating to centrifugal and like pumps. Pump casing carrying suction end flange delivery end flange, feet, a drive end cover supporting and carrying complete rotating element with water sealing devices and cover fixed to casing by studs or bolts so that the end cover can be separated and bodily removed together with rotating element and sealing devices from pump casing without interfering with suction flange or pipe of delivery pipe or flange.

53168. M. Chander. Improvements in or relating to self-priming centrifugal pumps. Reservoir communicating through ports directly with the chamber housing the impeller whereby direct communication between priming reservoir and the suction side is avoided.

NOVEMBER 19.

53169. SKF Kugellagerfabriken Gesellschaft mit beschränkter Haftung. Pivotal top roller weighting arm for drafting mechanisms in textile machinery. Supporting elements being provided with holding elements for holding

and/or guiding at least part of the drafting mechanism parts equipped with corresponding counter elements.

53170. SKF Kugellagerfabriken Gesellschaft mit beschränkter Haftung. Improvements in or relating to drawing mechanism for textile spinning frames. Providing at least one wedge-like clamp-chuk which supports itself against the supporting rod and a pressure frame of the brackets.

53171. S.K.F. Kugellagerfabriken Gesellschaft mit beschränkter Haftung. Improvements in or relating to textile drafting mechanism. Providing a fixture means to retain in position one top roller holder and extensions of the other top roller holders.

53172. The Dow Chemical Company. Process of preparing a mixture of meta- and para-ethyltoluenes substantially free of ortho-ethyltoluene, and meta- and para-methylstyrenes from said mixture. Reacting ethylating agent with toluene and fractionally distilling the products.

53173. Dr. B. Joos. Improvements in or relating to process for the preparation of regenerative serums. Cell suspension obtained from embryonic tissue is inoculated as antigen into an animal and the animal is bled to obtain the serum when the animal has reached sufficient degree of immunisation.

53174. Airflow (N'cle) Pty. Limited. A portable cooling or heating unit. A metal casing is charged with a fluid and is cooled in a refrigerator and used for cooling other substances.

53175. Painter Brothers Limited. Improvements relating to end and like connections for metal tubes and similar elements. (November 20, 1953.) Comprising a trough and terminal integral sections constructed to fit on tube end and secured thereto and allow an opening to tube.

53176. Douglas Fraser & Sons Limited. Improvements in winding machines for yarn and the like. (November 21, 1953.) A pedal-actuated device operatively connected to a carrier for the package to be wound and adapted, on depression of the pedal to cause the package to be lifted out of frictional contact with the driving roller.

53177. Aktiebolaget Svenska Flaktfabriken. An improved method and a device for air conditioning. Wherein the quantity of the primary air supplied is

automatically maintained constant and ejected air enters the unit at the rear side and is discharged after being mixed with the primary air from the front side.

NOVEMBER 20.

53178. The Stanton Ironworks Company Limited. Improvements in joints in pipes. The gland is turned relatively to the socket by a detachable rack member and one or more pinions mounted on a detachable carrier member.
53179. Chinoin Gyogyszer Es Vegyeszeti Termekek Gyara R. T. Process for the preparation of optically active threo- β -(p-nitrophenyl)-serine and derivatives thereof. Preparing salt of racemic threo- β - (p-nitrophenyl) -N-acyl-serine with brucine and separating diastereoisomeric brucine salt by fractional crystallization.

NOVEMBER 22.

53180. Bundy Tubing Company. Tube bending apparatus. Comprises combinations of a fluid pressure system, bending units and means for mounting fluid pressure motors on the bending units.
53181. F. S. Allinquant. Damped suspension for vehicle. Suspension means associated with a dash-pot arrangement including a fluid tight cylinder secured to one of the two sections connected through the suspension.
53182. Void.
53183. Siemens and Halske Aktiengesellschaft. A device for electric point operating machines for railways. To lock the point blades in both end positions which blades are rigidly connected with stretcher bars, the throw rods being so connected with the driving gear that the said gear after the point blades has reached its end position makes an additional movement.
53184. Metropolitan-Vickers Electrical Company Limited. Improvements relating to dynamo electric machines. (December 4, 1953.) Longitudinal passages together with inlet ports are formed in the conductors of the winding the inlet and discharge ports being spaced apart along the conductors.
53185. J. F. Scholten & Zonen Curacao N. V. Apparatus for the examination of textile-threads. Threads led through electric condenser connected in an electronic tube generator circuit and a

detector for rectifying high frequency oscillations, the output circuit being connected with a relay circuit into which impulses are fed.

53186. Ciba Limited. New nitro-dyes-tuffs and process for making them and printing or dyeing therewith. Treating an aryl compound free from water solubilising groups, which contains in ortho position to a nitro group a substituent, and in para position of the above substituent another substituent, to introduce aryl amino group and sulphonic acid aryl ester group respectively in place of the above two substituents.

53187. Ciba Limited. Process for the manufacture of vat dyestuffs of the indanthrone series. Subjecting a 1-amino-anthraquinone to fusion with small proportion of an alkali metalphenolate in the presence of an oxidising agent wherein high concentration of distillable constituent is maintained in the melt.

53188. S. Takakita, S. Takakita, M. Takakita, T. Takakita and A. Takakita. Breast of plough. The rear foot part of each member is hinged to a supporting plate, each member having a flat surface at its foot part and being formed so as to be more circular in section in its upper part than its lower foot part, the front part of each member being connected by a metal plate and a hook.

NOVEMBER 23.

53189. W. P. Warner. Improvements in or relating to the picking or plucking of tea leaf or the like agricultural products. One or more power driven cutter device on boom structure carried displaceably on a movable chassis and collector for the detached leaf thereon.
53190. A. Schmid. Improvements in and relating to saddle pumps for bicycles and motorcycles. Tubular saddle support member adjustably and arrestably fitted into the seat support tube and is closed at its lower end by a bottom piece and forms the pumps cylinder for a piston movably fitted into it.
53191. Void.
53192. Imperial Chemical Industries Limited. Improvements in the production of a wear resistant surface on ferrous metal parts. (December 1, 1953.) Heating the parts to a temperature above 500°C in a fused salt bath containing alkali metal cyanide alkali metal

cyanate, active sulphur and an inert diluent.

53193. Dorr-Oliver Incorporated. Treatment of polluted liquids. The grit is separated from the sludge by maintaining organic sludge solids in a discontinuous phase.

53194. Dr. Ing. E. Lackner. Prestressed bottom of trough-shaped building structure. The prestress of the anchor bolts or rods transmitting their prestress load deep into the underground is produced by means which impart forces that act perpendicularly on the load bearing surface.

53195. Council of Scientific and Industrial Research. Electrolytic preparation of para-aminophenol. By reduction of nitrobenzene at rotating amalgamated disc type cathode wherein inter-disc distance is at least equal to or more than the radial distance of the disc jutting out of the spacers.

53196. Council of Scientific and Industrial Research. Manufacture of upholstery leathers. Subjecting bark tanned hides and splits to retanning with normal or basic aluminium salts.

53197. Council of Scientific and Industrial Research. Process for the manufacture of tanned skins. Tanning acid or calgon pickled snake skins with aluminium salts.

53198. Void.

53199. Void.

NOVEMBER 24.

53200. Void.

53201. N. V. De Bataafsche Petroleum Maatschappij. A method for carrying out chemical reactions in gaseous phase. (November 27, 1953.) By introducing the initial materials into a vortex tube under conditions such that temperatures are attained for reaction to occur.

53202. Timbrol Limited. Improvements in the purification of 1, 1, 1-trichloro-2, 2-bis (4-chlorophenyl) ethane. (December 11, 1953.) Subjecting impure sample to centrifugal force while heating it progressively upto a temperature not exceeding the melting point of the purified sample.

53203. The General Electric Company Limited. Improvements in or relating to the manufacture of permanent magnets. (December 2, 1953.) Magnetisable metallic powder is covered with a

solution of an organic protective medium capable of forming a thin film on the metallic particles, the coated powder is pressed in dry state to form a compact which is then subjected to heat treatment for removing the said organic protective medium.

53204. Westinghouse Brake & Signal Company Limited. Improvements in or relating to ball valves. (January 5, 1954.) Comprising at least one resilient seating member in the form of a washer having a tubular portion perpendicular to the plane of and concentric with the washer, the seating member being held by clamping the washer within an annular recess and providing a seat for the ball at the projecting end of the tubular portion.

53205. Brentford Electric Limited and J. Gray. Improvements in or relating to heat pumps. (October 15, 1954.) Motor and compressor of the refrigerator are mounted in an oil filled casing and the casing is disposed in a hot water tank.

53206. S.A.I.C.A. Societa Anonyma Italiana Colori Affini. Process for the preparation of dyestuff emulsions and their application to the dyeing and printing of cloth and textile fibers. [Addition to No. 49630.] A water-in-oil emulsion containing a dyestuff or a dyestuff intermediate, said emulsion further containing a volatile organic water-immiscible liquid and an emulsifier being better soluble in the oil phase than in the aqueous phase.

NOVEMBER 25.

53207. Automatic Telephone and Electric Company Limited. Improvements in rack mounting arrangements. (December 17, 1953.) Mounting frame provided with a mounting plate carrying terminal field.

53208. Void.

53209. Daimler-Benz Aktiengesellschaft. Packing means for sealing joint between cylinder block and cylinder head in internal combustion engines. (October 20, 1954.) Plate like gasket inserted between flat joint surfaces being screened by rim-like projection on cylinder liner.

NOVEMBER 26.

53210. G. R. Gokhale. A service crate for collection of semen of Bulls or buffaloes for artificial insemination purpose. Consisting of two u-shaped pipes,

one above the other connected together by vertical pipes forming an inclined pipe assembly and means for holding the neck of animal.

53211. American Home Products Corporation. Process for the recovery of penicillin in the form of a therapeutically utilizable salt. Bringing aqueous solution of organic amine salt of penicillin with a water soluble organic solvent in contact with a water soluble salt of diamine.

53212. Sandoz A.G. Process for printing or pad-dyeing textile materials. [Addition to No. 51790.] The printing medium comprises aqueous viscose solution containing one simple organic nitrogen compound and at least one stable pigment dyestuff.

53213. Dr. H. P. A. Groll. Fractionation of oil by selective extraction. Liquid solvents consisting of at least two components, one being a liquid under operating conditions, while the other being a permanent gas at the operating temperature dissolved in the liquid, are used for the extraction.

53214. Shikoku Kasei Kogyo Kabushiki Kaisha. Improvements in or relating to the production of carbon disulphide. Introducing carbonaceous material into reaction chamber into which flows vapourized sulphur from sulphur vapourizing chamber.

NOVEMBER 27.

53215. Void.

53216. Albright & Wilson Limited. Ethylenimine methylolphosphorus polymers. Reacting one or more phosphorus compound with an ethylenimine compound.

53217. Albright & Wilson Limited. Production of phosphorus-containing polymers by polyesterification. Polyesterification is effected upon one or more of the phosphorus compound stated in the specification.

53218. Chemiewerk Homburg, Aktiengesellschaft. A process for the production of a bacteriostatic or bactericidal agent containing ascorbic acid. (November 22, 1954.) Reacting in solution ascorbic acid derivative of salt thereof with an amino acid especially found in body.

53219. The English Electric Company Limited. Improvements in and relating to feathering runner vane type hydraulic turbines and pumps. (December 8, 1953.) Wherein seating ring,

retractable during operation, comes into contact with runner vane tips to provide seal with them.

53220. Imperial Chemical Industries Limited. Modification of the properties of fibrous materials. (December 2, 1953.) Treating the fibrous materials with an organic hydrazide and nitrous acid.

53221. Allmanna Svenska Elektriska Aktiebolaget. Control device for speed regulation of motors. Comprises supporting members on which contacts are arranged operable in closing and opening direction.

NOVEMBER 29.

53222. S. S. Silva. An improved method of cooking vegetable fibrous raw materials for the production of pulp. (December 11, 1953.) Predigesting the vegetable fibrous raw material in predigestion chemical liquor, prior to cooking or mechanically pulping the fibrous material.

53223. N. V. De Bataafsche Petroleum Maatschappij. Process for preparing ethene or products consisting mainly of liquid alkenes by thermal cracking of higher hydrocarbons. Paraffin containing hydrocarbon fraction together with heated heat-transfer agent is led upward through reaction zone in which the contact time is less than 2 seconds.

53224. The General Electric Company Limited. Improvements in or relating to electrical circuit arrangements for supplying a plurality of time interlaced pulse trains, for use, for example, in automatic telephone systems. (December 4, 1953.) At selected ones of a plurality of output terminals each selected pulse train is determined by the phase of a control pulse.

53225. The British United Shoe Machinery Company Limited. Improvements in or relating to shoe upper conforming machines organised for lasting toe and portions of shoes. Comprises toe embracing wipers, power operated means to move the wipers, a plate like member, and means for moving the plate like member.

53226. Horden, Mason and Edward Limited. Improvements relating to power presses. (December 7, 1953.) An electric driving motor for operating the adjusting device in forms part of the ram.

53227. Hordern, Mason and Edwards Limited. Improvements relating to power presses. (December 7, 1953.) Comprises a screw and nut and adjusting device and ram and connecting rod assembly.

53228. Societe d'Applications Generales d'Electricite et de Mecanique. Improvements in apparatus for weaving centre selvages on a loom. A needle terminating in an eye and electromagnetic means for causing the needle to be oscillated.

53229. Societe d'Applications Generales d'Electricite et de Mecanique. Improvements in looms with mechanisms for producing in a woven fabric regularly spaced bands of different weft density. Comprising a variable speed drive for the take-off motion, a cam driven at a speed proportional to that of the take-off motion and a cam follower.

53230. D. P. McConnell. Method of and apparatus for separating ore. Subjecting the mixture of particles to an electric field to activate the particles characterised by relatively short electro levitation times but of a period of duration insufficient to activate other particles.

53231. Turner Brothers Asbestos Company Limited. Improvements relating to the weaving of multiply fabric and to friction elements embodying the fabrics. Wherein at one face each binder thread passes round every alternate face weft thread and lies between two face warp threads which pass on the inside of that weft thread.

53232. Platex (Pty) Ltd. Improved process for treating textile materials or articles. Coating the textile materials with a dispersion, emulsion or solution in an aqueous medium of a natural/synthetic polymer and setting the polymer in the presence of a catalyst.

53223. Nagynyomasu Kiserleti Intezet. Improvement in the process for the treatment of asphalt containing mineral oils and other asphalt containing hydrocarbonaceous materials to produce light and middle oils. The starting material is mixed with light or middle distillates such that the mixture contains 20—95 per cent. of frictions boiling in the range up to 350°C and reacted in vapour phase with hydrogen in the presence of a moving catalyst.

55234. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. Process for producing azo-dyes-

tuils insoluble in water on polyvinyl alcohol fibres or mixtures containing them. A coupling component and a diazo-amino compound of the general formula $R-N=N-N \begin{smallmatrix} R_1 \\ R_2 \end{smallmatrix}$ are applied to polyvinylalcohol fibres and the dyestuff is developed in an acid bath and treated with weak alkali.

NOVEMBER 30.

53235. Void.

53236. Sadolin & Holmblad A/S. Improvements in or relating to 3-pyridinols. Oxidising in alcohol solution a substituted 2, 3, 4-furans and then subjecting the resulting product to hydrolysis by being stored or heated in acid or neutral medium.

53237. The Metal Box Company Limited. Improvements in or relating to tamper-proof overseal caps for containers. The cap comprising a crown and a skirt the free edge of which is interned towards the inner surface of the cap to form a curl which is outside the plane of the skirt is characterised in that the crown has means to remove the cap from the container.

53238. Schnellpressenfabrik Aktiengesellschaft. Heidelberg. An automatic platen printing press. Shaft of the bell-crank lever system, which is displaceably mounted in an eccentric bush is detachably coupled by connecting rods with the drive of the inking mechanism.

DECEMBER 1.

53239. F. K. Irani. A self-fitting cap for bottles or the like. Provided with concentric rims vertically extending from the base wherein the layer rim is provided with vertical slits along the circumference and a groove running horizontally around the inner side of the base.

53240. Compagnie Francaise Des Matieres Colorantes. Improvements in and relating to diazoamino derivatives. (November 24, 1954.) A diazo or tetrazocompound is condensed, in a non-acid medium, with a 1-aminobenzene-2:4-dicarboxylic acid substituted on the nitrogen atom or with a water soluble salt thereof.

53241. Bristol Laboratories Inc. Production of Tetracycline. By growing under aerobic conditions a culture of a chlorotetracycline producing species of streptomycetes in an aqueous nitrogenous

nutrient containing carbohydrate solution under submerged aerobic conditions.

53242. L. Hartridge. Apparatus for testing fuel injector or fuel injection pump or pump unit for an internal combustion engine. Comprising an axially displaceable element positioned so as to be impinged upon by the liquid delivered by the injector, the element associated with contact means controlling by an electric circuit, this display of stroboscopic means of the rotary position of the shaft of the pump at the instant of delivery of the liquid from the injector.
53243. L. Hartridge. Improvements in and relating to machines for grinding conical surfaces. Including a guide engageable by a part of or associated with the workpiece and a driving belt engaging a cylindrical part of or associated with the workpiece, such as to retain the workpiece in the guide during grinding and to elect rotation thereof, the belt being arranged that axial component of force is imparted to workpiece while it is rotated.
53244. Maschinenfabrik Ruti A. G. Vormals Casper Honegger. Pressure roller for sizing machines. A support is provided between the jacket tube and a core within the tube.
53245. Maschinenfabrik Ruti A. G. Vormals Caspar Honegger. Hot air sizing machine with one-way air dryer. The dryer has at least two guide rollers preceding it which change the direction of warp threads.
53246. Maschinenfabrik Ruti A. G. Vormals Casper Honegger. Improvements in or relating to picking devices for mechanical looms. Picker stick is actuable by a cam and two swinging elements form an operative connection between the cam and stick.
53247. Maschinenfabrik Ruti A. G. Vormals Casper Honegger. A method of feeding the weft bobbins to the automatic bobbin changing arrangement of looms and mechanism for carrying out the method. Contains for reception of superposed weft bobbins are adapted to be exchangeably attached to the loom.
53248. Unilever Limited. Improvements in or relating to detergent compositions. [Addition to No. 50091.] Consists of soap and 0.01 to 5 per cent. by weight of a thiuram disulphide and a stabilising compound.
- DECEMBER 2.
53249. J. G. Russell. Printing. Comprising the use of separately formed stencil sheets, and character cut outs, being arranged upon a gelatine hectograph pad.
53250. Void.
53251. Dr. N. Jayaraman. Manufacture of a sitric soluble fertiliser. Mixing ground phosphate with fluxes and heating at 1000 to 1250°C.
53252. Electraulic Presses Limited. Improvements in and relating to means for controlling the pressure in a hydraulic system. (December 14, 1953.) Two or more master valves set at different pressures and under control of by pass valve arranged to cut in and cut out the master valve set a lower pressure so as to maintain the pressure in the system at lower or higher valve and control valve rendering pressure liquid in system available for operating a hydraulic press or other motor.
53253. T. J. R. Bright. Improvements in moulds and methods of producing same. Investing the ceramic or high temperature resisting material to a pattern composed of a wax, low melting point alloy, frozen mercury or other heat fusible material.
53254. British Insulated Callender's Cables Limited. Improved means for helically lapping a string or similar member on a wire or equivalent member. (December 8, 1953.) String drawn over a stationary smooth body of circular cross section concentric with the path of the wire and caused to slip over the wire.
53255. Void.
53256. F. S. Winkelman and R. R. Hammans. Improvements in or relating to means for transferring the oil fumes produced in internal combustion engines to the induction systems of the engines. (December 3, 1953.) Void after publication. Conducting fumes from crankcase or valve cover to heating chamber and fed from there to engine induction system downstream of throttle valve.
53257. Standard Telephones and Cables Limited. Improvements in or relating to an automatic telecommunication exchange. (December 3, 1953.) In which a member of different supervisory signals may be transmitted via the communication path, each said signal being

conveyed by an electrical pulse which occupies a particular one of a number of time positions in a repetitive cycle of time positions.

DECEMBER 3.

53258. William Ayrton & Co. Limited and F. Asborne. Improvements in or relating to the sizing and polishing of yarns. (December 9, 1953.) Arranging yarn over guides to form a closed polygonal geometric figure around rotary brush.

53259. C. N. S. Rampery. Fuel supply device for internal combustion engines. Having ring-shaped body with vanes projecting aspirally downwardly and converging to central axis of pipe with roughened surfaces.

53260. B. C. Patel. Improvements in or relating to loading machines. Comprising a mobile frame-work which carries an inclinably disposed conveyor belt travelling on rollers supported by the frame-work, a rotatable disc with grooves, means for operating the rollers of the conveyor belt.

53261. Standard Telephones and Cables Limited. Improvements in or relating to thyatron controlled rectifier power supply units. (December 11, 1953.) Comprises a bridge arrangement of rectifiers including thyatron and means for controlling the firing of the thyatron.

53262. Standard Telephones and Cables Limited. Improvements in or relating to electro-magnetic transducers. (April 9, 1954.) Comprises an electromagnetic transducer, a non-ferrous cup member and outer shell member and means for preventing the displacement of the cup.

53263. Standard Telephones and Cables Limited. Improvements in or relating to containers for electrical components. (April 14, 1954.) Comprises two similar base plates each provided with a plurality of fixing holes.

53264. Creed and Company Limited. Facsimile transmitter. Blanking means for controlling an output circuit connected to the transmitter drum scanning means, includes a circuit means to effect a blanking period which circuit means is controlled by a voltage generating means.

53265. Compagnie Pour La Fabrication Des Compteurs Et Material D'Usines A Gaz. Improvements in or relating to

fluid meters. Turbine-type fluid meter having two concentric-coaxial helices in which a plane of communication is provided between the outlet flow in one of the helices of the turbine and the inlet flow in the other helix.

53266. Void.

DECEMBER 4.

53267. Void.

53268. Elektrokemisk A/S. Improvements relating to electrolytic furnaces for the production of aluminium. Iron shielding means is disposed between each anodic busbar and the furnace bath, a shielding means is arranged to provide a magnetic path extending transversely to the length of the busbar.

53269. The General Electric Company Limited. Improvements in or relating to the manufacture of luminescent materials. (December 18, 1953.) [Addition to No. 47784.] Heating a mixture of compounds of barium and/or strontium, lithium, silicon with a cermin compound and subjecting the product to an additional step in a carbon dioxide atmosphere.

DECEMBER 6.

53270. Void.

53271. Void.

53272. Void.

53273. Cluett, Peabody & Co., Inc. Machine for treating a woven fabric web. Comprises means for feeding forward the web, means for shrinking the web, dryer for the web and means for delivering the web.

53274. Imperial Chemical Industries Limited. Improvements in or relating to the actuation of pneumatically operated mechanical devices and improved gas generating charges therefor. (December 21, 1953.) Comprising a unitary charge of colloided nitrocellulose-nitroglycerine composition in which the composition containing not more than $2\frac{1}{2}$ per cent. of its weight of aromatic constituents.

53275. N. V. De Bataafsche Petroleum Maatschappij. Improved compositions containing biocidal substances. [Addition to No. 47654.] Comprising 10—75 per cent. of biocidal solid and filler, 10—50 per cent. of water-immiscible liquid, 0.25—25 per cent. of emulsifying agents and 10—40 per cent. water.

53276. Goodyear Aircraft Corporation. Improvements in laminated panel. Faces of sheets coated with thermosetting resinous adhesive dried and heat and pressure is applied after inserting a layer of open mesh gauge.
53277. The British Thomson-Houston Company Limited. Improvements in electrical systems for measuring small distances or movements between relatively movable parts. (December 18, 1953.) Comprising an element arranged capacitatively with a part of the apparatus to provide a capacitance, which is connected in a direct current circuit to derive an output dependent in amount on the spacing between the element and the part of the apparatus.
53278. Algemeene Kunstvezel Maatschappij Naamlooze Venootschap. A method of manufacturing fabric from smooth surface materials and a loom for carrying out the method. (October 28, 1954.) Impregnating the fabric made from smooth surfaced materials with a sizing material after weaving but before removing from the loom.
53279. Hughes Tool Company. Bit head for a well drilling tool. A passage in the bit head provided for flushing fluid between the interior and exterior, a nozzle of wear resistant material inserted slidably into the end of the passage and engaging an abutment, and a seal between the outer circumference of the nozzle and the inner wall of the passage.
53280. Cognate with appln. No. 53047.
53281. Ciba Limited. Process for the preparation of a deserpidic acid its esters and its salts. By subjecting deserpidine to the action of an alkaline saponifying medium and isolating the resulting deserpidic acid and esters thereof.
53282. Void.
53283. C. W. Cheney and Son Limited and C. W. Cheney. Improvements in metal fittings for attache and suitcases and the like. The attachment plate is provided at one end with an inwardly turned hook with its throat perpendicular to the plane of the plate and the hook arranged to engage over an edge of the case.
53284. Director, Indian Central Jute Committee, Technological Research Laboratories. Improvements in or relating to a process for brightening hessian made from dark-coloured jute. Hessian is treated with an agent from the group (a) "Calgon" (4 per cent. in water), diammonium hydrogen phosphate (2 per cent. in water) and (b) trisodium phosphate (3 per cent. in water), disodium hydrogen phosphate (3 per cent. in water) and sodium pyrophosphate (1 per cent. in water), the treatment with the agent of group (b) being followed by SO_2 treatment.
- DECEMBER 7.
53285. C. C. F. Cuvier. Improvements in hibernating apparatus. Comprising a bag to receive a patient, and cooled by refrigerated air conditions and sterilised in a device communicating with the bag.
53286. Elektrokemisk A/S. Improvements relating to electrode holders. Contact clamps are forced against the electrode surface by one or more elastic membranes being pressed inwardly against the clamps by fluid pressure applied to their outer surfaces.
53287. Imperial Chemical Industries Limited. Pigmented coating compositions. (December 18, 1953.) Comprising pigmented aqueous dispersion of polyvinyl chloride or vinylchloride-vinylacetate copolymer containing not more than 25 per cent. of vinyl-acetate.
53288. Dunlop Rubber Company Limited. Fluid pressure systems and operating means therefor. Means associated with member for pressurizing fluid in master-cylinder and foot pedal actuating the member, for progressively decreasing rate of movement of member for uniform movement of foot pedal as the pedal is actuated.
53289. Pilkington Brothers Limited. Improvements in or relating to the manufacture of flat glass. (December 10, 1953.) Causing a ribbon of glass to move along a bath of molten metal in which the ribbon is supported as floating element, protecting surface of metal against oxidation and regulating temperature of bath to chill the glass.
53290. Maschinenfabrik, Augsburg-Nürnberg A. G. Driving means for two part sluice members of weirs, dam outlets, galleries and other conduit systems which are under hydraulic pressure. One or more driven means one of the two sluice member by way of a movement member resistant to tension and compression.

53291. E.R.F. Maier. Device for improving the propelling and manoeuvrability of screw-propelled vessels. A bulb like part arranged in the extension of and behind the propeller the leading edge of the bulb overlapping the hub and extending upto the rear trailing edge of the propeller blades.

DECEMBER 8.

53292. Void.

53293. The Chloride Electrical Storage Company Limited. Improvements in separators for use in electric accumulators. Comprising an inorganic powder highly liquid absorbent and a binding agent, moulded to form separators for accumulators.

53294. Commercial Solvents Corporation. Improvements in or relating to new antibiotic and method of preparing the same. Cycloserine is produced by cultivating *Streptomyces orchidaceous* in an aqueous nutrient medium under submerged aerobic conditions.

53295. Ciba Limited. Deserpidic acid lactone and salts thereof, and process for their preparation. Heating with a lactonising agent a compound of the formula $\text{Des}=\overset{0.4}{\text{C.O.R.}}$ to obtain the corresponding lactone.

53296. Chambon Limited. Improvements in or relating to printing and like machines. Impression table pivotally mounted at a point, lying between impression table surface and axis of curvature of that surface, located on a lever fixed to a rocking shaft, the distances of the axis of pivot of impression table from its surface and from axis of rocking shaft and the distance of the rocking shaft axis from the plane of operation are such that when shaft is rocked, the impression table executes a rolling motion.

53297. H. W. Waldenmaier. Improvements in or relating to butterfly check valves. Wherein fulcrum pin of flap is located in its upper half close to its seats.

53298. Libbey-Owens-Ford Glass Company. Glass sheet bending apparatus. A furnace, a conveyer for carrying moulds on which glass sheets are supported, burners within the furnace for applying localized heat on glass sheets and means outside the furnace for burner movement.

53299. Libby Owens Ford Glass Company. Method and apparatus for bending glass sheets or plates. Comprising hingedly connected mold sections, defining a shaping surface on the upper surface thereof and means on the end sections forming a part of the shaping surface and movable in alignment therewith.

53300. Void.

53301. Komline-Sanderson Engineering Corporation. Improvements in or relating to filter media and process and apparatus for filtration using the same. Series of spring lengths secured by threaded studs having smooth cylindrical outside and helically threaded internal surfaces.

DECEMBER 9.

53302. Otis Elevator Company. Protective mechanism for power-operated doors in elevator installations. A protective edge is yieldably mounted on the closure with control mechanism and means for keeping protective edge in retracted position the control mechanism being actuated by pressure on the protective edge, thus preventing closing.

53303. The Yorkshire Copper Works Limited. and J. C. Briggs. Improvements in or relating to pipe fittings, couplings and similar connections. An adherent flux material is carried by the fitting at the lateral wall portion.

53304. Tipdex (Holdings) Limited Cabinets. Comprising a casing and at least two filing boxes tiltably mounted in the casing so that they can be opened or closed tiltably, with means to limit their opening.

53305. Sylvania Electric Products, Inc. Improvements in or relating to apparatus for evacuating or exhausting electric discharge devices. Including the combination of a resilient collar for receiving the tubulation of the electrical device, a pin slidably disposed in a chamber in the head, having ports therein and being movable into said collar and means for pinching said resilient collar about said pin.

DECEMBER 10.

53306. Mira, Narodni Podnik. Method and apparatus for braking a thread. The yarn is braked by sliding and rolling friction in a plurality of points of contact independent of each other.

53307. C.A.V. Limited. Liquid fuel injection pumps for internal combustion engines. (December 23, 1953.) Extra fuel supply device comprising combination with working chamber of variable-volume cavity with freely movable shuttle, passage between cavity and fuel inlet and valve controlling the passage.
53308. J. M. Cooper. Improvements in or relating to tiffin carriers. The component vessels of tiffin carrier are arranged side by side in a crate or like device; and lids of all vessels are held in position on a single bar, so that they may be closed or opened simultaneously.

DECEMBER 11.

53309. Howards of Ilford Limited. Process for the manufacture of 3:3:5-trimethyl-cyclohexanol. (December 11, 1953.) Isophorone or dihydroisophorone is hydrogenated in the presence of Ni-catalyst and the catalyst removed when 80 per cent. or more of the high melting isomer of 3:3:5-trimethyl-cyclohexanol is formed.
53310. Howards of Ilford Limited. Process for the manufacture of 3:3:5-trimethyl-cyclohexanol. (December 11, 1953.) Cyclohexanol containing at least 40 per cent. by weight of the low melting isomer is made by maintaining cyclohexanol containing at least 70 per cent. by weight of the high melting isomer in contact reduced nickel catalyst.
53311. Void.
53312. The Goodyear Tire & Rubber Company. Improvements in tractor tire. Peripherally extending rib portion increases the thickness of the undertread at each lateral edge.
53313. The Goodyear Tire & Rubber Company. Apparatus for reducing skidding of hydraulically braked vehicles. Automatic lockout control apparatus for a valve mechanism having valves operable to provide normal manually controlled braking upon failure of antiskid control.
53314. The Goodyear Tire & Rubber Company. Improvements in heat absorbing means. Body of an impervious material having therewithin closed cells of filling material having specific heat greater than the body.
53315. N. V. De Bataafsche Petroleum Maatschappij. Process for producing catalytic gasoline and related lighter

products from petroleum involving hydrogenation and catalytic cracking. The oil destined for catalytic cracking is splitted into two portions and one of the portion is hydrogenated.

53316. Ed. Geistlich Sohne. A. G. Fir Chemische Industrie. Process for the production of new anaesthetic compounds. Reacting dialkylamine with

$$\begin{array}{c} R_1 \\ | \end{array}$$

$R-NH-CO-CH=C-R_2$ where R_1 is hydrogen or alkyl and R_2 is alkyl.

53317. Ed. Geistlich Sohne A.G. Für Chemische Industrie. Process for the production of new anaesthetic compounds. Reacting piperidine or mono-alkylpiperidine with a $R-NH-CO-CH=$

$$\begin{array}{c} R' \\ | \end{array}$$

$C-R^2$ where R^1 is hydrogen or alkyl and R^2 is alkyl.

53318. Imperial Chemical Industries Limited. Improvements in or relating to the manufacture of consumable electrodes. (December 18, 1953.) Lightly compacting a mass of material to be melted in sponge, powder or other suitably subdivided form in a die and thereafter heating the compacted mass in inert atmosphere at 800°C to 1000°C.

DECEMBER 13.

53319. Council of Scientific And Industrial Research. A process for improving the storage life of cashew kernels. Cashew kernels are fixed in hydrogenated oil containing autioxidant and an aid synergist.
53320. Void.
53321. Void.
53322. Void.
53323. Void.
53324. Void.
53325. American Steel Foundries. Improvements in automatic couplers for railway cars. One arm of the knuckle thrower moves the knuckle while the other arm is engaged in a guide slot formed in a wall of the head.
53326. Herden Mason & Edwards Limited. Improvements relating to stock feeding mechanism. (December 17, 1953.) Comprising feeding members disposed along a stock feed path to move in unison, atleast one member is mounted for movement towards and away from said path.

53327. E. I. Du Pont De Nemours and Company. Improvements in or relating to apparatus for continuously perforating webs. (November 12, 1954.) Comprising a plurality of dies and co-acting perforators and supporting the web by a wheel lying concentrically within a ring.

53328. Allen & Hanburys Limited. Improvements relating to surgical operation tables. (December 14, 1953.) Void after publication. The table has a platform with means to swing it in desired positions.

53329. Shivaji Works Ltd. Improvements in or relating to vices or like gripping apparatus. Operating screw of the vice operates in a nut which is supported on both sides of the screw at the same level as the latter.

53330. John Thompson Water Tube Boilers Limited. Improvements in or relating to steam generator installation. (August 9, 1954.) Comprising a burner supplying hot gas at a temperature higher than that required to heat steam tubes and means for adding cooling gas thereto to adjust the temperature.

DECEMBER 14.

53331. K. B. Fakirchand. Improvements in or relating to receptacles for betels, betel-nuts or the like purposes. Comprising a body into the shape of a bird or fowl, said body having a cover in the shape of wings or feathers hingedly mounted at the tail end, the neck of the body being made rotatable so that in one position the base of the neck forms a catch for the wings in closed position while in another position it releases the wings which open out.

53332. Libbey-Owens-Ford Glass Company. Apparatus for shaping or bending glass sheets. Mold comprising a plurality of hingedly connected sections movable from an open to a closed position and means operatively connected and relatively movable with respect to the mold for supporting and lowering a glass sheet.

53333. Libbey-Owens-Ford Glass Company. Process and apparatus for bending and tempering glass. Process including the steps of supporting a sheet of glass over the bending surface of a mold, moving the mold and the glass thereon along a predetermined path, heating selected areas of the glass for bending, then heating the bent sheet

uniformly and then finally chilling the opposite surfaces uniformly, all during movement along said path.

53334. N. V. De Bataafsche Petroleum Maatschappij. Process for the separation of a mixture of substances by distillation and/or absorption. Wherein gases discharged from the unit or a part thereof, are allowed to expand in a vortex tube and cold thus generated is used to cool a stream flowing in or out of the unit.

53335. The Colombo Commercial Company Limited and J. Bryden. Improvements in and relating to air or gas-heating furnaces. (February 18, 1954.) The banks of tubes forming the sides of the combustion chamber are inwardly stepped to increase the area of the hot face of said chamber.

53336. Metalcraft (India) Limited and J. M. Houtson. Improvements in or relating to the casting of concrete walls for houses or other buildings. A pair of formers with holes are kept in position by a U-shaped arm and concrete is poured in the space between it.

53337. Imperial Chemical Industries Limited. Improvements in or relating to the manufacture of electrodes and their use in the melting of high melting point metals or alloys. (December 18, 1953.) Feeding the raw material in sponge, pellet or like form to the melting chamber of an arc melting furnace at a higher rate consistent with complete melting.

53338. Burgerspital Basel. Improvements relating to a method and to an apparatus for cleaning syringes. The apparatus comprises a centrifugal washing machine having a perforated vertical rotatable drum in the axis of which is situated a stationary tubular squirting part having nozzle mouth in its wall, and container like fixtures to receive components of syringe.

53339. The General Electric Company Limited. Improvements in or relating to electrical attenuators. (December 17, 1953.) Comprising a wave guide and a member carrying a non-uniform resistive layer and the resistance per unit area in such that the member presents little impedance in any position.

53340. The General Electric Company Limited. Improvements in or relating to electrical attenuators. (December 17, 1953.) Comprising a waveguide and a member carrying a resistive layer comprising either a multiplicity of separate

areas of conducting materials or a multiplicity of non-conducting areas between which there is resistive material.

53341. Gerrard Industries Limited. Packaging machines. (December 16, 1953.) Having means to apply initial tension to strand, which operates means to start final tensioning mechanism to operate strand joining means.

53342. Societe Nouvelle Des Etablissements Brandt. Improvements in and relating to a fin arrangement for a projectile. Fins have the general shape of a segment of a cylinder and such cross-section that when folded the fin arrangement forms a unit having a cylindrical outer shape.

53343. Societe Nouvelle Des Etablissements Brandt. Improvements in and relating to a fuse for a projectile and applications thereof. Having a lock for maintaining the spacer device in operative position and an arming device for automatically retracting said lock when the fuse is subjected to a particular acceleration.

53344. Godfrey L. Cabot Inc. Improvements in pelletization of finely divided materials (November 11, 1954.) Agitating a mass of fluffy material thereby converting it to pellets, recycling a portion of the pellets to a zone where material is in fluffy state and removing the remaining portion as product.

53345. Kugelfischer Georg Schafer & Co. Spinning or twisting spindle. Providing mutually offset retaining means within the end portion of the whorl and on the periphery of the upper end of the spindle bearing housing.

53346. Void.

DECEMBER 15.

53347. Council of Scientific and Industrial Research. A process for the production of a new type of fertilizer and soil conditioner. Reacting humic acid or products containing same with ammonical liquor.

53348. Council of Scientific and Industrial Research. A process for removal of pink colour and offensive smell from solid or liquid bitters. Passing the liquid bitters or a solution of solid bitters or a mixture of solid and liquid bitters through cellulose or paper pulp filters.

53349. Gyanendra Nath Banerjee. Improvements in or relating to tongs.

Comprising two double bent limbs one end of which is slightly curved and a downwardly curved looped piece attached to the point where the limbs are rivetted.

53350. Gyanendra Nath Banerjee. Improvements in or relating to mecker type burner. Gas and air mixing chamber made up of inverted metallic cone having air slits on both sides.

53351. Rheinbau G.m.b.H. Improvements in sheet metal constructional elements, particularly girder. Consists of a strip of sheet metal provided with incisions which are disposed in rows at an inclination to the longitudinal axis of the strip.

53352. Aktiebolaget Pharmacia. Process for producing nitriles. Reacting a halogenide (alkyl), CCH_2CH_2-Hal with a cyanide.

53353. The Parker Pen Company. Non solid erasable writing medium and instrument utilizing same. Comprising a viscous oily carrier including stable colloidal dispersion of pigment particles in the carrier and a highly tacky material such as tar, asphaltum, polymeric resinous material or the like.

53354. A. Reyrolle & Company Limited. Improvements relating to electric circuit breakers. (December 21, 1953.) Arc drawn in arc extinguishing dielectric fluid in tank moulded of cast synthetic resin of low moulding pressure type, one or more high voltage conductors extending through tank wall directly embedded therein so as to prevent leakage of fluid.

53355. Weaving Research & Textile Commission Agents Limited. Improvements in woven textile fabrics. Weft threads inserted in alternation from opposite sides of the fabric are looped back in the opposite selvage, so producing a U form of weft.

53356. British Insulated Callender's Cables Limited. Improvements in electric cables for high working voltages. (January 4, 1954.) Insulated by helical lappings of polyethylene terephthalate.

53357. British Celanese Limited. Improvements in or relating to weaving. (January 14, 1954.) Using the reed mounted on a pivotally oscillating sley to beat-up the weft into the fell of the cloth.

53358. Chas. Pfizer & Co. Inc. Improvements in or relating to preparations

for agricultural use. Comprises a streptomycin type antibiotic, a tetracycline type antibiotic and a carrier.

53359. The British Thomson-Houston Company Limited. Improvements relating to high pressure mercury vapour electric discharge lamps. (January 5, 1954.) The outer envelop is filled with an oxidising gas, and the molybdenum leads which pass through this gas space is protected from oxidation by a coating containing chromium or silicon

DECEMBER 16.

53360. Orr & Sembower, Inc. Improvements in or relating to control system for burner apparatus for heating steam generators. (December 28, 1953.) Comprising a control system for modulating the combustion rate of the burner having means responsive to variations in steam pressure supplied by the boiler to control directly both fuel and air supply.

53361. Orr & Sembower, Inc. Improvements in or relating to steam generators. (December 28, 1953.) Comprising a fire tube boiler, a burner, a control system for the burner, a combustion tube extending through water compartment, a plurality of fire tubes extending through water compartment, a second plurality of fire tubes extending through the water compartment and adapted to conduct flue gases.

53362. Dunlop Rubber Company Limited. Improvements in or relating to bias cutting machines. Comprising means driving conveyor belt at predetermined speed and at reduced speed, photo-electric detectors, means actuated by interruption of the first beam during normal speed drive to engage the reduced speed drive, means actuated by interruption of second beam to stop the conveyor, means actuated by interruption of third beam to start reduced speed drive in reverse and means for cutting the fabric with delayed action means.

53363. Dunlop Rubber Company Limited. Improvements in or relating to pneumatic tyres. Sandwiching a rubber cushion between the carcass and a steel breaker comprises plies of steel cords.

DECEMBER 17.

53364. J. Blum. Cleaning apparatus for floors, window-panes and the like.

Comprising a sponge-like insert gripped in a U-shaped carrier, a squeezing arrangement comprising a two-armed holder with rollers, and pushing and pulling elements mounted on a guide handle.

53365. Void.

53366. American Home Products Corporation. 4-Aryl-azacycloalkanes and preparation thereof. Heating a 3-aryl-3-cyano-1-dialkylamino-omega-haloalkane or a 1 or 2-alkyl derivative thereof to a cychzing temperature not exceeding 250°.

53367. E. J. F. Powell. Improvements in or relating to a device for the operation and locking of facing points of railway permanent way. Comprising plunger slidably mounted on a base plate and a stretcher blade holding facing points, grooves on the stretcher blade, bolts on the plunger and means to operate the plunger to set the facing points and lock them in position.

53368. Void.

53369. Council of Scientific and Industrial Research. A solar heating device. Consisting of a reflector of mirrors inclined one to another to produce coincident image from the mirrors, the mirrors mounted on portable framework and the focal length of the reflector is at least twice the maximum dimension of the reflector surface and the reflector provided with the support such as a hinged leg to adjust the reflector to maintain the image at a fixed focal position.

DECEMBER 18.

53370. Libbey-Owens-Ford Glass Company. Glass sheets bending apparatus and method. Consisting of atleast two members hinged together with shaping surface on them on which the glass sheet is supported in bending position, a frame for supporting the members at said points that the centre of gravity of each member lies between the hinge and frame.

53371. Libbey-Owens-Ford Glass Company. Glass bending apparatus. Mould with plurality of sections conforming to marginal out lines of glass sheet, hingedly moved to open and closed position and shaping surface on each section conforming to curvature of bent sheet.

DECEMBER 20.

53372. Council of Scientific and Industrial Research. Improvements in or relating to the manufacture of ceramic bodies suitable for making ceramic capacitors. Sintering at 1100° to 1300°C tablets made by pressing titanium dioxide of commercial quality.
53373. V. K. G. Menon and P. Jayaramdas. Ball or socket ended turn-buckles for attaching direct to ball and socket type disc insulators. Screw threaded rod screwed into nut formed with yoke, other end of yoke or rod shaped or formed as ball or socket to fit into socket or onto ball on a disc insulator.
53374. Void.
53375. J. Lackner and G. Lang. Means for erecting bolted or rivetted structures of prefabricated components. Prefabricated components with apertures of at least two different diameters arranged equally spaced in two rows, the bigger holes alternating with smaller holes in each row.
53376. J. Lackner and G. Lang. Method of producing structures using insert washers or insets in combination with bolts, screws and the like fasteners. Cylindrical sleeve to fit in perforation to structural components to be connected together and having a perforation in which shank of bolt or rivet is lodged and marginally protruding flange resting on surface of structural component.
53377. Director, Indian Institute of Science, Bangalore. Development of a new universal electronic A.C. meter testing equipment. Comprises three winding transformer, phase shifter, cathode follower, a gain control amplifier and a power amplifier.
53378. V. Stark. Improvements in refrigerated clothing. A cooling apparatus is provided in a collar provided in the garment.
53379. The English Electric Company Limited. Improvements in and relating to electric controllers of the liquid resistance type. (January 1, 1954.) Comprises in combination an electrolyte tanks and sets of electrodes each set being fixed in position within the electrolyte tank.
53380. The English Electric Company Limited. Improvements relating to automatic voltage control systems (January 5, 1954.) Generator and motor armatures are connected in closed series load circuit with the motor armatures and generator armatures arranged alternately.
53381. The English Electric Company Limited. Improvements in electric connections and lock nuts therefor. (January 8, 1954.) Comprises a threaded conducting stem and a conductor clamped on the stem.
53382. Imperial Chemical Industries Limited. New Compositions for use in the manufacture of light-sensitive photographic materials. (January 1, 1954.) [Addition to No. 49667]. Replacing some or all of the gelatine in the silver halide emulsions used, by one or more gelatine substitutes.
53383. Imperial Chemical Industries Limited. Dyestuff compositions. (January 6, 1954.) Comprising one phthalocyanine compound selected from cobalt, iron, tin or vanadium phthalocyanines and one or more tetra-azaporphin compounds.
53384. Imperial Chemical Industries Limited. Anaesthetic compositions. (January 6, 1954.) Comprising a solution of 2-(β -naphthoxy)-ethanol, and one or more barbituric acid derivatives, in polyalkyleneglycol.
53385. Universal Oil Products Company. Process for converting crude oil into more valuable hydrocarbons. Distilling oil reforming portion of recovered gasoline to produce free hydrogen, deasphalting portion of residual fraction, hydrocracking same to form gasoline and supplying to reforming step.
53386. National Lead Company. Method for separation of contaminant from titanium metal. [Addition to No. 49731]. By leaching the titanium metal with an acidic solution containing 10 to 20 per cent. nitrate compound on a NO_3 basis.
53387. B. Flamand. Improvements in and relating to moulding of tubular concrete bodies. The body is moulded in upright position between an outer mould and core.
53388. Intonacatrice Tigre S. r. l. Apparatus for spraying mortar, cementitious material and the like. Slurry is in an open container and means are provided to blow compressed air thereon.
53389. David Brown Tractors (Engineering) Limited. An improved disc plough. (December 28, 1953.) Plough discs mounted on the main frame by means hanger bracket angularly adjustable in a vertical plane.

DECEMBER 21.

53390. Council of Scientific and Industrial Research. An improved method for the production of manganese sulphate from manganese ores and its application for the regeneration of the spent electrolytic manganese sulphate bath. Digesting manganese ore with dilute sulphuric acid and iron.

53391. Void.

53392. Void.

53393. D. Napier & Son Limited. Improvements in or relating to electrical de-icing equipment. At least one of two terminals connecting the resistance element, is arranged beneath a part of the resistance element and spaced from this part of the resistance element by electric insulating substance.

53394. C. Schondelmaier. Improvements in or relating to cold pressing of work-pieces. Characterised in pressing blank with ram having cylindrical projection into die having closed base.

53395. The British Periclase Company Limited. Improvements in or relating to refractory magnesia clinkers. (December 30, 1953.) Clinker contains lime, silica and alumina in given percentage.

53396. Brentford Transformers Limited. Improvements in or relating to electrical contact devices. (December 22, 1953.) Comprising a pair of rolling contact elements movable along a transformer or like coil and mounted on a carrier to turn about an axis parallel to that of the coil.

53397. Chas. Pfizer & Co., Inc. Anhydrotetracycline compounds and process for preparing the same. Oxy-, desdimethylamino oxy-, diacetyloxy-, desdimethylaminodesoxyoxy-, desdimethylaminochlor-, desdimethylamino-, or iso-desdimethylaminooxy- tetracycline or methomycin is treated with an acid dehydrating agent until one molecule of water is removed.

DECEMBER 22.

53398. Director, Technical Development (TD-16). Improvements in or relating to pressure sensitive waterproof adhesive tapes. The tape comprising a natural rubber adhesive on a fabric base with a plastic backing is made by applying a dough based on nitrocellulose reinforced with carbon black on one side, and the adhesive obtained by

masticating rubber with plasticisers, rosin or ester gum on the other side.

53399. Director, Technical Development M.G.O. Branch. Improvements in or relating to water and flame proofing textiles. By applying to the material first phosphate of antimony and then chlorinated polymeric compounds like polyvinyl chloride.

53400. W. D. MacLean. Electroplating apparatus. Rack having means supporting work pieces to be plated, an electrode fixed to each end of the rack, a tank receiving the rack and having container for electrolyte mounted on each end thereof, each container being arranged to receive one of said electrodes.

53401. W. D. MacLean. The chromium plating of aluminium. Cooling the bath to prevent temperature from exceeding 67°F, the bath consisting essentially of chromic acid and the sulphate radical.

53402. Chas. Pfizer & Co., Inc. Improvements in or relating to steroids and the preparation thereof. Applying to a partition chromatography column a solution in a non-polar organic solvent of mixture obtained when Reichstein's compound S is subjected to oxygenating activity of a fungus.

53403. British Insulated Callender's Cables Limited. Improvements in the manufacture of electric cables. (January 13, 1954.) Insulated by building up on the conductor a body of insulation formed from rubber tape and applying fluid rubber so as to fill spaces that may otherwise occur between the conductor and the said body and thereafter vulcanising the fluid rubber

53404. Dr. Ing. R. Maculan. Improved method of construction of roof structure. Wires chords or ropes of high tensile strength stretched longitudinally between two end are porages, and resting an intermediate beams; concrete mixture poured to make covering slabs self supporting between stretched wires.

53405. Unilever Limited. Improvements relating to containers and method for making same. (December 22, 1953.) Comprising a rigid ester support member and an inner tubular liner, the latter being turned back over the support member and closed by an end closure member.

53406. Creed and Company Limited. Improvements in or relating to electrical networks for deriving a bias potential (May 4, 1954.) Means for selecting

ratio between variation of supply and bias potential, varying in sympathy with supply potential fluctuations and for selecting bias potential prevailing at correct supply voltage.

53407. Standard Telephones and Cables Limited. Radio direction finding system. (May 21, 1954.) Of the type in which the directional information is obtained from the phase relationship between a reference wave and the modulation imposed on received energy by reason of its being collected by means of a scanning antenna system.

53408. Polygram Casting Company Limited. Improvements in or relating to a method and apparatus for producing shell moulds and hollow cores for foundry purposes. Feeding moulding mixture through a delivery pipe under pressure, the movement of the mixture being controlled by a device fitted adjacent the end of the delivery pipe.

53409. Skylux Limited. Improvements relating to machines commonly called "thrust borers" for use in boring underground and for positioning underground service-pipes, conduits, cables and the like. Wherein thrust exerting means are two crossheads simultaneously opening in opposite directions so that when one reaches end-of-thrust position other is at start-of-thrust position.

53410. Sylvania Electric Products Inc. Improvements in or relating to processing of electrical components. Vacuum depositing metallic material on a support in successive layers by exposing the support to vapour of the metal and periodically measuring the light transmission characteristics of film which is a measure of resistance.

DECEMBER 23.

53411. Evenska Aktiebolaget Gasaccumulator. Welding or soldering pin with fuse wire. Pin or stud is provided at its back end with a fuse wire, arranged as conductor for supply of welding current to the pin or stud.

53412. H. W. Ward and Company Limited. Stock feed mechanisms for lathes. (January 25, 1954.) Comprising a guide for carrying the stock bar, a pusher for advancing the bar, a fluid operated motor, a valve for controlling the fluid.

53413. Sawyer's Inc. Holder for stereopaired transparencies and its method

of manufacture. Having a plurality of transparency windows around its centre, alternate windows having parts of the stereoscopic views in an upright manner, the intermediate windows having a following sequence in inverted order.

DECEMBER 24.

53414. Council of Scientific and Industrial Research. Treatment of molasses to render it suitable for use in phenolic-type moulding compositions. Dehydrating the molasses under vacuum and heating the product.

53415. Scholven-Chemie Aktiengesellschaft. Process for the purification of crude benzene. (December 16, 1954.) Subjecting the mixture of crude benzene of hydrogen to such a heat treatment that no evaporation of benzene takes place and that polymerisable impurities are converted to higher boiling substances.

53416. Aktiebolaget Scania-Vabis. Device for purifying lubricating oil in internal combustion engines. Separating device in conduit between oil sump and places of engine to be lubricated subdivides oil into streams, passing the stream of increased purity to places to be lubricated and the other to a purifying filter.

53417. Westinghouse Air Brake Company. Fluid pressure brake apparatus. In which fluid under pressure from an auxiliary reservoir is employed to apply the brakes and the degree of brake application is controlled according to variations in fluid pressure in a brake pipe relative to datum pressure in a control reservoir.

53418. The Bharat Carbon Ribbon Mfg. Co. Ltd. A box or container. Lid is shaped like an ash tray at its upper face and a removable disc being connected to the lid which provide access to the container when removed.

53419. A. Kagalwala. Improvements in and relating to electric post top lanterns for outdoor and indoor illumination. Comprises a socket, a base, means for fitting fluorescent tubes and a control gear box.

53420. KO-WE Niederschachtofen Gesellschaft m.b.H. A method for smelting fine grained charge components in a shaft furnace. Fine grained ore and fuel are formed into compound pieces by sandwiching fuel layer between ore layers.

DECEMBER 27.

53421. T. J. R. Bright. A method and apparatus for producing an accurately dimensioned pattern of an object it is desired to reproduce. (December 16, 1954.) Consisting in immersing an object in mouldable material, converting the mouldable material to solidify adding a further mouldable material, allowing this material also to solidify separating the female mould parts thus formed to remove the object, interposing a parting strip between, introducing a third mouldable material into the mould cavity, converting this material to solidify and finally separating the mould parts.
53422. Compagnie Parisienne D'Outillage A Air Comprime, Societe Anonyme. Improvements in or relating to apparatus for transporting and distributing concrete or the like. The outlet duct of large diameter is connected to a vat by an intermediate bend portion the inner walls of which have a very gentle slope in the direction of the outgoing flow of concrete or the like.
53423. Compagnie Parisienne D'Outillage A Air Comprime, Societe Anonyme. Apparatus for projecting pasty materials such as cement or similar coating materials. The apparatus comprises a central tubular passage, an annular space of frusto-conical shape surrounding the outlet end of the passage, the annular space having a duct through which compressed fluid is supplied and an ejection tube in axial alignment with the tubular passage.
53424. Imperial Chemical Industries Limited. Process for the manufacture of new colouring matters of the tetra-aza-porphin series. (January 6, 1954.) Comprises heating a substance consisting of or containing a metal with appropriate dinitriles at least one of which containing an acid group.
53425. Imperial Chemical Industries Limited. New dyestuff compositions of the tetra-azo porphin series. (January 6, 1954.) Comprising at least two tetra-aza-porphin compounds one of which contains an acid or acid halide radical.
53426. Imperial Chemical Industries Limited. New pesticidal compositions containing new phosphorus esters. (January 11, 1954.) Comprising a phosphorothiolic acid ester and a carrier.
53427. J. Bellezane. Refractory lining for casting by the last wax process. Wherein a refractory powder is agglomerated by a binder having a base of butyl titanate diluted in an organic solvent.
53428. Mira zavody na pletene a stavkove zbozi, narodni podnik. A method and device for periodic gauging of equal lengths of thread and weaving with different wefts on shuttleless weaving looms. The length of drum is determined by the period of time of sliding movement of the thread along a smooth portion of the drum.
53429. Dr. G. R. Savur. A process of isolating the gelforming substance from tamarind kernel. By washing and immersing in water, dialyzing against N/10-N-20 acid, extracting proteins with 10 per cent. NaCl solution and again washing with water.
53430. Henry Simon (Holdings) Limited. Improvements in or relating to apparatus for remoulding or retreading tyres for vehicles. (January 15, 1954.) Segmental parts forming moulds form a section of a couple width with means provided for detachably securing the members together.
53431. L.R.F. Harris. Improvements in or relating to selecting systems for time division multiplex communication systems. Selection of a calling circuit is achieved in a number of stages by selecting means whose total number is equal to the number of stages.
53432. Henkel & Cie. G.m.b.H. Process for the production of aromatic carboxylic acids and/or their esters. An alkali salt of benzene dicarboxylic in which the carboxyl groups are not in the para-position, is heated above 340°C in the presence of a catalyst containing cadmium or zinc and the salt is converted into acid or ester.
53433. R. P. Heuer. Improvements relating to refractory bricks and structures thereof. (January 1, 1954.) The brick has a body of basic refractory and an oxidisable metallic plate is co-moulded with it and a tale is provided near one end of the brick.
53434. A. C. Wickman. Hydraulic clutch. Rotation of take-off shaft relative to a power input shaft is determined by the valve controlled flow of fluid through the pumps.

DECEMBER 28.

53435. Heinrich Koppers G.m.b.H. Process and apparatus for the production of gases. (December 21, 1954.) By injecting simultaneously two mixtures of carbonaceous fuel and a free oxygen containing gas into a reaction chamber and contacting the combustion products with an endothermic gasifying agent.

53436. Void.

53437. Sylvania Electric Products Inc. Improvements in or relating to electromagnetic coils. Winding sheets of foil and insulating material in register onto core and slicing spiral coils from wound core and windings.

53438. Elektro-Thermit G.m.b.H. Mould for aluminothermic welding by the web-pouring process of rails and the like. Mould for aluminothermic welding of rails consisting of lateral inflow channels and risers, and flow grooves are arranged at the side of risers for outlet of molten steel.

53439. Macleans Limited. Improvements in or relating to the manufacture of tablets. (January 28, 1954.) Containing one or more sparingly solid medicaments and glycine in ratio by weight between 3:1 and 1:3.

DECEMBER 29.

53440. J. G. Talati. Improved adjustable cage assembling device. Comprising two traversible and two fixed sleeves each having a series of pivoted arms disposed in radial plane, the outer ends of radially disposed pivoted arms connected to longitudinal runners forming a cylindrical framework of a cage, traversible sleeves or flanges slidable upon the central shaft, a screw being provided where by the slidable sleeves may be traversed.

53441. Void.

53442. Capt S. Ramachandran. Improvements in or relating to an injection syringe. Comprising a barrel, a hollow stem connected at outer end with fluid supply means and a cap having engagement slots to hold the pins on the ring of the barrel.

53443. The Hotpoint Electric Appliance Company Limited. Improvements in or relating to electric cut-outs. Cut out has its contact carrying member of non-flexible construction.

53444. Vandervell Products Limited. Improvements relating to the joining to-

gether of metal parts. (January 11, 1954.) Equal number of correspondingly shaped and position apertures and projections are formed on the faces of the two metal parts and they are brought together face to face with projections inserted in the corresponding apertures.

53445. British Insulated Callender's Cables Limited. (Improvements in or relating to apparatus for marking wires and cables and the like. (January 20, 1954.) Marking head fitted with one or more centrifugally operated valves.

53446. Simon-Carves Limited. Improvements relating to coal or ore washing plant. (January 11, 1954.) Providing in a settling tank wherein the dense medium is returned to the tank for further densification wherein the density of the medium in the sink-and-float separator is measured for actuating the diverting means.

53447. P. C. Patin and M. G. Garnier. Improvements in or relating to conjugate gears and methods of machining same. Of the type comprising an internal tooth gear and an eccentric pinion meshing therewith and having at least one tooth less than said internal tooth gear.

53448. The Rawlplug Company Limited. Improved bolt anchor. Wherein tapered expansion member has radial projection engaging with circumferential or lateral projections on segment of a sleeve to prevent its withdrawal therefrom.

53449. J. Esswein and G. Henry. Improvements in or relating to ignition coils for internal combustion engines. Consisting of a metal container, a plastic cover, sealing means along the cover-engaging circular edge of the container, an axial rod extending within the container, a magnetic core and primary and secondary windings disposed around the axial rod, high voltage terminal at the head of the axial rod and a pair of low voltage terminals mounted in the lateral cavities on the cover.

53450. The Indian Oxygen & Acetylene Company Limited. Improvements in or relating to removal of traces of oxygen from gases or gas mixtures. (January 7, 1954.) Passing the gas at a space velocity not substantially above 2,000 reciprocal hours over manganous oxide at ambient temperature.

53451. Creed & Company Limited. Facsimile recorder. Comprising an electrically actuated stylus advancing motor stylus mounting bar and stylus turret.

53452. Creed & Company Limited. Facsimile recorder. Comprises flexible belts, metallic tension strands, cogs, metallic hubs, stylus holders, stylus guides and a conductive bar.

53453. Creed & Company Limited. Electrically inscribable lithographic offset printing plate. Comprises a base sheet having a adherent conductive ink receptive layer having thereon a thin adherent surface coating.

53454. Cognate with No. 53281.

DECEMBER 30.

53455. Void.

53456. Void.

53457. Bristol Laboratories Inc. Improvements in or relating to stable suspensions for therapeutic use. (August 19, 1954.) Consists of a salt of penicillin and coconut oil substantially free of tristearin

53458. Bristol Laboratories Inc. Improvements in or relating to stable oral

suspensions for therapeutic use. (August 27, 1954.) Consists of a special coconut oil which has been chemically changed or modified by ester interchange or esterification.

53459. Dano Ingeniorforretning og Maskinfabrik. Ingenior Kai Petersen's Fond. Method and apparatus for the fermentation of organic waste materials. Characterised in that air is supplied to container of aerobic fermentation over its whole length from plurality of apertures or nozzles.

53460. Daimler-Benz Aktiengesellschaft. Improvements relating to vehicle axle suspensions. (November 15, 1954.) Axle carrier is resiliently supported on the super-structure of the vehicle so that articulation point is above the road wheel centres.

DECEMBER 31.

53461. American Flange & Manufacturing Co. Inc. Capseal applying tool. (October 12, 1954.) Comprising a sealing head, a fluid pressure actuated operating member having an actuating stem, a mechanism for actuating stem to actuate the sealing head.

PART II.

Subject-Matter Index of Patent Applications for the Years 1952-1954.

This index covers all the published Applications included in the Chronological List in Part I of this volume. The entries are given by the Serial Numbers of the Applications, the date and other particulars may be found by reference to the List. This index forms a continuation of the indexes contained in the Consolidated Subject-Matter Index 1912-1932 and the Patent Office Journals published since 1934.

Each main class is distinguished by a symbol such as "LX(1)".

A

Abrading, *see* POLISHING, ETC.
 Abrasive band, belts, discs wheels and like article, *see* POLISHING, ETC.
 Abrasive blasting apparatus, *see* POLISHING, ETC.
 Abrasive cloth, *see* POLISHING, ETC.
 Abrasive wheels, *see* POLISHING, ETC.
 Absorption refrigerating systems, *see* COOLING, ETC.
 Acaricidal compositions, *see* DISINFECTING, ETC.
 Accumulator electrodes removing by means of liquids, *see* BATTERIES, ETC.
 Accumulators, electric, *see* BATTERIES, ETC.
 Acetals, *see* CARBON COMPOUNDS, ETC.
 Acetamides, substituted, *see* CARBON COMPOUNDS, ETC.
 Acetic acid, *see* CARBON COMPOUNDS, ETC.
 Ácetone, *see* CARBON COMPOUNDS, ETC.
 Acetophenoneo, *see* CARBON COMPOUNDS, ETC.
 Acetylene, *see* CARBON COMPOUNDS, ETC.
 Acid amides, *see* CARBON COMPOUNDS, ETC.
 Acridine compounds, *see* CARBON COMPOUNDS, ETC.
 Aerifonitriles, *see* CARBON COMPOUNDS, ETC.

Activated carbon, *see* NON-METALLIC, ETC.

Activation of catalysts, *see* CHEMICAL PROCESSES, ETC.

Acytryptophanes, resolution of, *see* CARBON COMPOUNDS, ETC.

Adaptor piece for fluid pipe lines, *see* PIPE-JOINTS, ETC.

Additives for fuels, *see* FUEL, ETC.

Addressing and like series printing machines, *see* PRINTING.

Address-printing plates, *see* PRINTING.

Adhesive bands for closing paper wrappers, *see* LABELS, ETC.

ADHESIVE MATERIALS AND COMPOSITIONS (OTHER THAN RUBBER). XLII(1).

adhesive coating wooden chips with, *see* PAINTS, ETC.

compositions containing rubber, *see* INDIA RUBBER, ETC.

Compositions (for joining surface to surface by a thin layer excepting gelatine and gun and starch).

46975, 47412, 49787, 49825, 50420, 50627, 50648, 51081, 51120, 51276, 51985, 51986, 52028, 52364, 52403, 52881. 52894.

Gelatine and glue preparation of 49053.

Gums and like plant products preparation of. 46951, 52167, 53429.

pectin, *see* Gums, etc.

plywood adhesives, *see* Compositions, etc.

ADHESIVE MATERIALS, ETC.—contd.

- Sizes and finishes for paper and textile materials other than resin sizes.
47458, 49405, 49542, 50497.
- Starch, dextrine and gluten, preparation of. 46794, 47482, 47950, 47951, 48630, 48640, 51595, 51884, 52085.
- thermoreponsive adhesives apparatus for handling, *see* Composition, etc.
- Adhesive repair patches rubber, *see* INDIA RUBBER, ETC.
- Adhesive tapes for Stationery purposes, *see* BOOKS, ETC.
- Adhesive tapes making, *see* PROOFING, ETC.
- Adhesives coating wooden chips with for making boards, machines for, *see* PAINTS, ETC.
- Adrenocorticotrophic (ACTH) hormones *see* DISINFECTING, ETC.

ADVERTISING AND DISPLAYING APPARATUS (OTHER THAN MONOGRAMIC APPARATUS). XLI(1).

(This heading does not include articles of utility which are adapted to carry advertisements.)

- advertising and signalling monogramic apparatus for, *see* SIGNALS, MISCELLANEOUS.
- displaying printed or photographic reproductions stationary apparatus for, *see* Other than, etc. (Miscellaneous).
- illuminated advertisements other than moving, *see* Other than moving (Miscellaneous).
- luminescent target and luminescent screen for radar observation training devices, *see* Moving, etc. (Illuminated, etc.).
- Moving and changing—
- Illuminated and optical apparatus.
 48151, 50280, 50954, 51756, 52537.
- Other than illuminated, and optical apparatus.
 48431, 50954, 52537.
- Other than moving—
- Attached advertisements on vehicles and miscellaneous article. No case.
- Boards, and posters. 49081.
- Miscellaneous—
- Display apparatus for printed or photographic reproductions 51276.

ADVERTISING AND DISPLAYING, ETC.—contd.

Other than moving—

 Miscellaneous—contd.

- Illuminated advertiseing and display apparatus other than moving and changing. 46493, 48334, 52477.
- Illuminated kiosks. 47349.
- Illuminated models. 51538.
- signs, illuminated and non-moving and non-changing, *see* Other than, etc. (Miscellaneous).

AERATING LIQUIDS. XIV(1).

Apparatus other than siphon bottles.
46484, 46907.

Siphon bottles. No case.

Aerating sewage, *see* SEWAGE, ETC.

Aerial monorail systems, *see* RAILWAY, ETC. PERMANENT, ETC.

Aerials *see* WIRELESS, ETC.

AERONAUTICS. LIII(1).

(This heading does not include construction of instruments fitted on aircraft for indicating observing and recording purposes or for use in aerial warfare or articles of furniture and wearing apparel.)

cracks detecting in aeroplane parts other than by electric or electromagnetic tests, *see* GAUGES, ETC.

Details and accessories apart from general design—

 Controlling, steering and balancing.
 48337.

 Fuselage and body construction.
 48584, 49585, 49586.

 Launching, and landing including landing gear construction.
 50940, 51406

 Miscellaneous details—

 De-icers. 50072, 50078.

 De-icing equipment for aircraft.
 53393.

 Ejecting seats. 47895, 49976, 50695.
 52663, 52664, 52665.

 Securing cargo in freight compartments, 49587.

 Parachutes. 47895.

 Planes and wings. 51594.

 Propelling. 49076, 49593, 50479, 51589.
 51594.

ejection seats for aircrafts, *see* Details, etc., (Miscellaneous, etc.).

freight carrying and securing means, *see* Details, etc., (Fuselage, etc.).

gangways build in aircraft doors, *see* Details, etc., (Fuselage, etc.).

gust detecting and alieniating systems, *see* Details, etc., (controlling, etc.).

AERONAUTICS.—contd.

Heavier-than-air aircraft, general design of. 50939.
helicopters, *see* Heavier-than-air, etc.
jet deflectors for jet propelled aircrafts, *see* Details etc. (Propelling).
launching wheels, *see* Launching, etc.
Lighter-than-air aircraft, general design of. 52484.
magnetic fluid for detecting cracks etc in aeroplane parts, *see* DYNAMO ELECTRIC, ETC.
propulsion units, *see* Details, etc. (Propelling, etc.)
seats arrangement of, *see* Details, etc., (Fuselage, etc.).
stairwaysfuselage, *see* Details, etc., (Fuselage, etc.).
tank, fittings for, *see* TANKS, ETC.
enings, *see* Details, etc., (Planes, etc.).

AGRICULTURAL IMPLEMENTS. I(1).

(This heading includes only cultivating, gardening and harvesting appliances. For farmyard appliances *see* ANIMALS, ETC.)

axles fitting and clamping in tractors, *see* MOTOR VEHICLES.
brakes for tractors, *see* BRAKES, ETC.
butt cutters, cane stalk, *see* Harvesting, etc.
chaff-cutters, *see* Miscellaneous, etc.
chassis construction tractor, *see* MOTOR VEHICLES.

Cultivating implements.

46701, 46736, 46762, 46854, 47092,
47156, 47279, 47301, 47518, 47811,
47944, 48003, 48115 48159, 48411,
48498, 48647, 48684, 48848, 49064,
49098, 49099, 49180, 49181, 49183,
49818, 50192, 50240, 50325, 50953,
51015, 51217, 51732, 51975, 52262,
52415, 52592, 52905, 53000, 53001,
53156, 53188, 53389.

cutting tobacco, *see* Miscellaneous.
defoliation of plants composition for, *see* Miscellaneous, etc.
depth adjusting mechanisms for tractor tuted implements, *see* Cultivating, etc.
digging attachments for vehicles, *see* EXCAVATING, ETC.
disc plough, *see* Cultivating, etc.
Gardening appliances. 46854, 46878, 50119, 50336, 51106.
grass beating machine, *see* Miscellaneous, etc.
grass-cutting machine, *see* Gardening, etc.
harrows, *see* Cultivating, etc.

AGRICULTURAL, ETC.—contd.

Harvesting appliances.
46854, 46878, 47970, 48822, 48975,
49576, 49739, 50336, 52698, 53189.
hedge cutting machines, *see* Gardening, etc.
hoes, *see* Cultivating, etc.
insecticides, introducing into soil, device for, *see* Miscellaneous, etc.
lawn mowers, *see* Gardening, etc.
Miscellaneous agricultural implements—
Chaff-cutters. 46604, 46605, 47464, 49847.
Chopping fodder. 47759.
Crops sprays. 46854.
Cutting tobacco. 47356.
Defoliation of plants compositions for 47197, 49551, 52603.
Grass beating machine. 50336.
Insecticides and fertilisers introducing into soil, devices, for. 49105, 49737, 52518.
Irrigation or sprinkling machine. 50355.
Plant growth regulating composition. 50490.
Road rollers. 49993.
Seed dressing composition. 47984.
Tool bar for securing gauged implements to tractors. 47175.
Weeds destroying appliances. 48229, 52738.
mowing machines for fields, *see* Harvesting, etc.
mowing machines lawn, *see* Gardening, etc.
mowers for fields tractor, borne, *see* Cultivating, etc.
ploughs, *see* Cultivating, etc.
plucking tea leaf, *see* Harvesting, etc.
power driven cutting tools tractor borne, *see* Cultivating, etc.
power transmission mechanisms for mowing machines, *see* MECHANISM MISCELLANEOUS.
pumping crops, *see* Gardening, etc.
rollers, road, land, and garden, *see* Miscellaneous, etc.
rotary hoes, *see* Cultivating, etc.
schoping means for warking soil, *see* Cultivating, etc.
seed dispensing mechanism for seed planters, *see* Sowing, etc.
seed dressing compositions, *see* Miscellaneous, etc.
seed planters, *see* Sowing, etc.

AGRICULTURAL, ETC.—contd.

soil conditioning for cultivation, *see* MANURES, ETC.

Sowing appliances.

46854, 47292, 47825, 49109, 49288,
49685, 49771, 50615, 50723, 51074.

spray devices, *see* SPRAY, ETC.

sprayer (insecticides) for crops, *see* Miscellaneous, etc.

steering mechanism for tractor drawn implements, *see* Cultivating, etc.

sugar cane harvesters, *see* Harvesting, etc.

tires for tractor wheels, *see* WHEELS, ETC.

tool bars for coupling gauged implements to tractors, *see* Miscellaneous, etc.

tractors, agricultural, *see* Cultivating, etc.

tractors, attachments for carrying passengers in, *see* ROAD VEHICLES, ETC.

tractors, harvesters mounting attachments for, *see* Harvestings, etc.

tractors-trailer implement hitches, *see* Cultivating, etc.

valves for hitch linkage pressure fluid operated systems in tractors, *see* VALVES, ETC.

weed destroying appliances, *see* Miscellaneous, etc.

weeds killing compositions, *see* DISINFECTING, ETC.

AIR AND GASES, TREATING. XLVII(1).

(This heading does not include cooling, drying and heating of air and gases, and ventilations.)

air and gas filters specially adapted for internal combustion engines, *see* INTERNAL, ETC.

air filter, *see* Treating, etc. (Separating, etc.).

Compressing, exhausting and moving—

Bellows and air-pump using flexible bags or diaphragms. 49076, 50417.

Miscellaneous—

Bobbin stripping mechanism. 50706.

Compressing by injectors. 47434.

Gases storing. 46561.

Pressure limiting, etc. 47577.

AIR AND GASES, ETC.—contd.

Compressing, exhausting and moving—
Miscellaneous—*contd.*

Suction devices for removing dust-fluff and broken thread ends from spinning machines. 46702, 46703, 46704, 46705, 47948 51890.

Valves for compressors and pumps. 47757.

Piston pumps.

48829, 50417, 51570, 53288.

Vacuum and pressure cleaning and dusting apparatus domestic. 46825, 48091, 48266, 51771.

compressors, bladed turbine type, *see* TURBINES, ETC.

control valves for gas cylinders, *see* VALVES, ETC.

conveying or forcing gaseous fluids by undulated flaccid members, *see* Compressing (Bellows, etc.).

dust separating from gases, *see* Treating, etc. (Separating, etc.).

fluff and dust removing by suction, *see* Comprising, etc. (Miscellaneous).

gas mixtures separating by liquifying, *see* Treating, etc. (Liquifying, etc.).

gases separating into fractions by liquifying, *see* Treating, etc. (Liquifying, etc.).

humidifying, *see* GAS MANUFACTURE, ETC.

internal combustion operated free piston compressors engine details of, *see* INTERNAL COMBUSTION, ETC.

matter cylinders, compressed air for pneumatic pressure systems, *see* Compressing, etc. (Piston pumps).

pressure limiting arrangements for pumps and compressors and the like, *see* compressing, etc. (Miscellaneous).

pumps, reciprocating piston, *see* Compressing, etc. (Piston pumps).

reciprocating type compressors, *see* Compressing (Piston, etc.).

saddle pumps for cycles, reciprocating piston type, *see* Compressing, etc. (Piston pumps).

solids separating from air, *see* Treating, etc. (Separating, etc.).

stripping bobbins by suction, *see* Compressing, etc. (Miscellaneous).

suction cleaners, *see* Compressing, etc. (Vacuum, etc.).

suction device for removing broken thread ends from spinning machines, *see* Compressing, etc. (Miscellaneous).

AIR AND GASES, ETC.—concl'd.

Treating otherwise than by compressing and exhausting and moving—

Liquefying, solidifying and revaporising.

48470, 48473, 49552, 50062, 51155, 51969, 52204, 52235 52256, 52646.

Miscellaneous.—No case.

Separating dust, for and solid particles from, other than by washing.

47184, 47488, 47534, 49910, 50094, 51162.

Storing under pressure.

46561, 51529, 52016.

turbo-compressors, *see* **TURBINES, ETC.**

valves for air or gas pumps and compressors, *see* **Compressing, etc. (Miscellaneous).**

Air circuit breakers, electric, *see* **ELECTRIC SWITCHES, ETC.**

Air conditioning apparatus arrangement and adaptation, of for ventilating, *see* **VENTILATION.**

Air conditioning apparatus cooling systems for, *see* **COOLING, ETC.**

Air content in plastic concrete determining, *see* **CEMENT, ETC.**

Air cooling, *see* **COOLING, ETC.**

Air craft wheels, *see* **WHEELS, ETC.**

Air filters specially adapted for internal combustion engines, *see* **INTERNAL, ETC.**

Air, heating other than by furnaces, *see* **HEATING SYSTEMS, ETC.**

Air or gas heating furnace, *see* **FURNACES, ETC.**

Air separating into fractions by liquifaction, *see* **AIR, ETC.**

Air, treating in radioactive ionizers and electrostatic separator, *see* **CHEMICAL PROCESSES, ETC.**

Air tubes for pneumatic tyres, *see* **WHEELS, ETC.**

ALARMS, BURGLAR AND THE LIKE AUTOMATIC. LI(1).

51236.

ALARMS, FIRE AND TEMPERATURE. XXXIX(1).

No case.

Alcohol purifying by distillation, *see* **DISTILLING, ETC.**

Alcoholic beverages, *see* **BEVERAGES, ETC.**

Alcohols, *see* **CARBON COMPOUNDS, ETC.**

Aldehydes, *see* **CARBON COMPOUNDS, ETC.**

Aldols, *see* **CARBON COMPOUNDS, ETC.**

Aldosterone and its derivatives, *see* **CARBON COMPOUNDS, ETC.**

Alkaloids, *see* **CARBON COMPOUNDS, ETC.**

Alkoxy benzene, *see* **CARBON COMPOUNDS, ETC.**

Alkyd resins, *see* **CARBON COMPOUNDS, ETC.**

ALLOYS. XXXIII(1).

Containing aluminium but not iron.

46944, 49875, 50550, 50761, 51557, 52045, 52335, 53015.

Containing barium, calcium, magnesium, and strontium (but not aluminium and iron).

49253.

Containing chromium (but not containing aluminium, barium, etc. and iron).

46781, 52869.

Containing iron.

46948, 47007, 47033, 47370, 47517, 47955, 49875, 50517, 50798, 51408, 52106, 52132, 52751, 52869, 52920, 53015.

Containing molybdenum, nickel, potassium, sodium, tantalum, titanium, tungsten, uraneum, vanadium, zinc, zirconium, copper, lead, manganese and other miscellaneous metals (but not iron, aluminium, barium, etc. and chromium).

46716, 47370, 50300, 50301, 50536, 50761, 51369, 51557, 52005, 52132, 52729, 53015.

ferromanganese, *see* **Containing iron, etc.**

Making processes.

46716, 46781, 46948, 47007, 47033, 47690, 47955, 48487, 48677, 50761, 50798, 51238, 51408, 51557, 51902, 52106, 52132, 52335, 52392, 52920.

refining, *see* **Making, etc.**

Almirahs, *see* **FURNITURE.**

Aluminium casting, *see* **CASTING, ETC.**

Aluminium hydroxide, *see* **CHEMICAL COMPOUNDS, ETC.**

Aluminium producing by electrolysis, *see* **ELECTROLYSIS, ETC.**

Aluminium producing otherwise than by electrolysis, *see* METALS EXTRACTING, ETC.

Alumino thermic welding, *see* METAL WORKING.

Amides, *see* CARBON COMPOUNDS, ETC.

Amines, *see* CARBON COMPOUNDS, ETC.

Amino-compounds, *see* CARBON COMPOUNDS, ETC.

Aminopropane diols, *see* CARBON COMPOUNDS, ETC.

Ammonia, *see* CHEMICAL COMPOUNDS, ETC.

Ammonium salts, in organic, *see* CHEMICAL COMPOUNDS, ETC.

AMMUNITION AND AMMUNITION RECEPTACLES. XXXIX(2).

Ammunition cartridges. 49132, 49598.

Blasting and mining cartridges, charges, detonators, fuzes and tamplings.

47059, 47263, 47340, 47341, 47525, 48093, 48689, 48978, 49079, 49128, 49266, 49492, 49493, 49854, 49974, 50118, 50448, 50487, 50617, 50650, 50688, 50704, 50731, 50839, 51317, 51634, 52323, 52623, 52879, 53104, 53274.

Cartridge loading, unloading, and finishing off. 52164.

compositions for use in blasting, *see* EXPLOSIVES, ETC.

detonators, *see* Blasting, etc.

electric igniters for blasting layouts, *see* Blasting, etc.

explosive composition, *see* EXPLOSIVES, ETC.

fuses for blasting and mining cartridges, *see* Blasting, etc.

gas generating charges, *see* Blasting, etc.

grenades, *see* Projectiles.

igniting devices for blasting and mining cartridge faces charges, *see* Blasting, etc.

ignition devices for rockets and rocket motors, *see* Projectile fuses, etc.

incandiar composition for blasting and mining cartridges fuses, *see* Blasting, etc.

land mines, *see* 'Blasting', etc.

Packing, storing and handling ammunition (special devices for). No case.

power gas generating cartridges, *see* Blasting, etc.

AMMUNITION AND AMMUNITION, ETC.—contd.

Projectile fuses and apparatus for setting. 46937, 49791, 50645, 50786, 52566, 53343.

Projectiles.

46919, 47525, 47526, 48235, 48747, 50009, 50786, 51233, 51719, 51720, 52383, 53342.

projectors for guiding the initial path of missiles, *see* Projectiles, etc.

rockets, *see* Projectile, etc.

safety devices for projectiles, *see* Projectiles.

training rounds or ammunitions, *see* Ammunition, etc.

Amplifiers, thermionic, *see* WIRELESS, ETC.

Amplifying electric currents thermionic circuit for, *see* WIRELESS, ETC.

Ampoules and the like containers for therapeutic substances, *see* DISINFECTING, ETC.

Anaesthetics, *see* DISINFECTING, ETC.

Anderno corticotrophin preparations, *see* DISINFECTING, ETC.

Androstenes, *see* CARBON COMPOUNDS, ETC.

Anilides, *see* CARBON COMPOUNDS, ETC.

Aniline derivatives. *see* CARBON COMPOUNDS, ETC.

ANIMALS, HOUSING, FEEDING, CATCHING, DESTROYING AND FARMYARD APPLIANCES. I(2).

breeding apparatus for silkworm, *see* Miscellaneous.

Destroying appliances (other than traps). 48243.

Guards for preventing access of insects and animals.

No case.

incubators, *see* Miscellaneous.

mineral supplement for cattle food, *see* Miscellaneous.

Miscellaneous—

Animal food. 47050, 48125, 49714, 50014, 50060, 51227, 52779.

Incubators. 48495, 52844.

Milking machine. 48491.

Service crate for artificial insemination. 53210.

ANIMALS, HOUSING, ETC.—contd.

Traps for catching animals and insects
No case.

Animals intesting rupturing to produce guts, *see* ROPES, ETC.

ANNEALING, TEMPERING, AND MODIFYING CHARACTER OF METALS. XXXIII(2).

Annealing boxes and like receptacles for heat treatment.

No case.

Cementation, (including case hardening, malleabilising and otherwise modifying chemical characters of metals).

No case.

Heating and cooling, treatment by.
47952, 49874.

Miscellaneous—

Modifying physical characteristics of metals by mechanical high frequency vibrations. 50752.

Modifying physical properties of metals, etc. 52888.

Strength of metals increasing by cold working. 47046.

Anodes for primary electric cells, *see* BATTERIES, ETC.

Anodic coating of metals and alloys, *see* ELECTROLYSIS, ETC.

Anodising metal surfaces, *see* ELECTROLYSIS, ETC.

Antennae or aerial conductors for wireless signalling, *see* WIRELESS, ETC.

Anthraquinhydrones, *see* CARBON COMPOUNDS, ETC.

Anthraquinhydrones substituted, *see* CARBON COMPOUNDS, ETC.

Anthraquinols, *see* CARBON COMPOUNDS, ETC.

Anthraquinones, *see* CARBON COMPOUNDS, ETC.

Anti-bacterial substances for therapeutic use, *see* DISINFECTING, ETC.

Antibiotic preparations, *see* DISINFECTING, ETC.

Antifoam compositions for boilers, *see* STEAM GENERATORS.

Antiknock motor fuels, *see* FUEL, ETC.

Antioxidants for rubber, *see* INDIA RUBBER, ETC.

ANNEALING, ETC.—contd.

Antioxidants for stabilizing food products, *see* FOOD, ETC.

Antiperspirant composition, *see* TOILET, ETC.

Antiseptic soaps, *see* SOAPS, ETC.

Antiseptics, *see* DISINFECTING, ETC.

Antiskid devices controlling brakes of vehicles, *see* BRAKES, ETC.

Antistatic treatment of textile materials, *see* DYEING, ETC.

Antitubercular composition, *see* DISINFECTING, ETC.

Aprons, cots or like coverings for rollers in general, *see* FABRICS FINISHING, ETC.

Aprons for drafting machines, *see* SPINNING, ETC.

Aprons or cots for drafting rollers, *see* FABRICS FINISHING, ETC.

Aprons or cots for fibre drafting rollers, *see* SPINNING, ETC.

Arc furnaces, electric, *see* HEATING BY ELECTRICITY, ETC.

Arc lamps, electric, *see* ELECTRIC LAMPS, ETC.

Arc melting of metals and alloys, *see* HEATING BY ELECTRICITY.

Arches and roofs for furnaces, *see* FURNACES, ETC.

Aromatising of acoffee extract powders, *see* TEA, ETC.

Artificial boards, *see* INDIA RUBBER, ETC.

Artificial fibres, *see* CELLULOSE, ETC.

Artificial fibres, modifying physical and chemical properties of, *see* CELLULOSE, ETC.

Artificial filaments, threads fibres or the like, *see* CELLULOSE, ETC.

Artificial limbs, *see* MEDICAL, ETC.

Artificial lines for impedance matching, *see* TELEGRAPHS, ETC.

Artificial threads, apparatus for washing, *see* DYEING, ETC.

Aryl indoles, *see* CARBON COMPOUNDS, ETC.

Asbestos cement pipes by moulding, *see* MOULDING, ETC.

Ascorbic acid, *see* CARBON COMPOUNDS, ETC.

ANNEALING, ETC.—concl'd.

- Ash removal devices for boilers furnaces, **FURNACES, ETC.**
- Ash removal devices for boilers furnaces *see* **FURNACES, ETC.**
- Ashes and dust removing from furnaces, *see* **FURNACES, ETC.**
- Asphalt compositions, *see* **PLASTIC, ETC.**
- Asymmetrically conductive element circuits for wireless signalling, *see* **WIRELESS, ETC.**
- Asymmetrically conductive element or rectifier for converting electric current, *see* **ELECTRIC CURRENTS, ETC.**
- Asymmetrically conductive elements, *see* **CONDUCTORS, ETC.**
- Atomisers, *see* **SPRAY PRODUCERS, ETC.**
- Atomizing apparatus, *see* **SPRAY, ETC.**
- Attenuators, electrical, *see* **TELEGRAPHS, ETC.**
- Audio-frequency amplifiers, *see* **WIRELESS, ETC.**
- Aureomycin, *see* **DISINFECTING, ETC.**
- Aurocyanide, *see* **CHEMICAL COMPOUNDS, ETC.**
- Auscultation and percussion sounding instrument, medical, *see* **MEDICAL, ETC.**
- Auto cycles pedal assemblies for, *see* **CYCLES, ETC.**
- Automatic guns, *see* **SMALL ARMS, ETC.**
- Automatic telephone system, *see* **TELEPHONES, ETC.**
- Automatic voltage regulation systems, *see* **ELECTRIC SUPPLY, ETC.**
- Auxiliary propulsion units for aircrafts, *see* **AERONAUTICS.**
- Awnings, *see* **BUILDINGS, ETC.**
- Axle boxes, railway, *see* **BEARINGS, ETC.**
- Axle suspensions motor vehicles, *see* **MOTOR VEHICLES, ETC.**
- Axles for tractors, *see* **MOTOR VEHICLES.**
- Azeotropic distillation, *see* **DISTILLING, ETC.**
- Azo dyes, *see* **CARBON COMPOUNDS, ETC.**

B

- Baby Comforters or soothers, *see* **MEDICAL, ETC.**

BAGS, PURSES, SACKS, PORTMANTEAUX, BASKETS AND WICKERWORK. XL(1).

- Bags, sacks, wrappers and like relatively flexible packages (other than of paper).
- 48102, 48148, 48700, 49166, 50097, 51112, 52019.
- Baskets, woven crates and wickerworking.
- No case.
- bolt and like fastenings, for portfolios, bags and the like goods, *see* **FASTENINGS, ETC.**
- buckles for holdall straps, *see* **DRESS, ETC.**
- envelopes, postal wrappers, *see* **Paper bags, etc.**
- hat boxes, *see* **Portmanteaux, etc.**
- holdalls, *see* **Bags, etc.**
- knapsacks, *see* **Bags, etc.**
- leather purses, *see* **Portmanteaux, etc.**
- luncheon baskets and picnic fitted, *see* **Portmanteaux, etc.**
- mail bags, *see* **Bags, etc.**
- Paper bags, wrappers and like (including making envelopes). 50008.
- Portmanteaux, suitcases, bags and like relatively non-flexible article carriers. 48897, 50097, 50166, 50167, 50210, 51075, 51308, 52177, 53283.
- purse with key holders, *see* **Portmanteaux, etc.**
- Bailing machines, *see* **PACKING, ETC.**
- Baking ovens, *see* **COOKING, ETC.**
- Balances, weighing, *see* **WEIGHING, ETC.**
- Balancing devices for shafts and the like, *see* **MECHANISM MISCELLANEOUS.**
- Balancing networks for cables, *see* **TELEGRAPHS, ETC.**
- Balancing voltages in electric supply systems, *see* **ELECTRIC SUPPLY, ETC.**
- Ball mills, *see* **GRINDING, ETC.**
- Ball point writing implements, *see* **WRITING, ETC.**
- Ball valves, *see* **VALVES, ETC.**
- Balloons. toys, *see* **GAMES, ETC.**
- Ballot boxes, *see* **INDICATING, ETC.**
- Balls, playing and the like, *see* **GAMES, ETC.**

BAGS, ETC.—contd.

- Bamboo pulp, manufacturing, *see* PAPER.
 Bamboos treating for producing pulp, *see* PAPER.
 Band conveyors, *see* LIFTING, ETC.
 Bandages, dressings, plasters and the like, *see* MEDICAL, ETC.
 Bandages for surgical casts, *see* MEDICAL, ETC.
 Bands packing, *see* PACKING, ETC.
 Barges, *see* SHIPS, ETC.
 Barrels and like receptacles, *see* HOLLOW WARE.
 Bars, for reinforcing concrete structures, *see* BUILDINGS, ETC.
 Base exchange materials and compositions for purifying water and unspecified liquid, *see* WATER, ETC., PURIFYING.
 Batching machine for delivering numeral quantities of articles, *see* CALCULATING, ETC.
 Batching or softening jute, *see* DYEING, ETC.
 Bates for tanning leather, *see* LEATHER.
 Baths, *see* CLOSETS, ETC.

BATTERIES, ELECTRIC. LVIII(1).

Accumulators—

Details unclassified—

Battery case. 46490.

Terminals of accumulators. 51368.

Electrodes, separators and like components, forms and arrangements of.

46971, 46972, 47394, 47623, 48513,
 48628, 49613, 49892, 49921, 50145,
 50148, 50149, 50300, 50301, 50667,
 50825, 50891, 50949, 51148, 51320,
 51367, 51378, 51472, 51498, 52442,
 52443, 53293.

Electrolytes for charging. 50825.

alloys for making plate grids, *see* ALLOYS.anodes for primary cells, *see* Primary, etc., (Electrolytes, etc.).charging storage batteries, *see* ELECTRIC SUPPLY, ETC.

Dry cells. 46916, 47134, 47936, 48006,
 48216, 48997, 49089, 49149, 49412,
 49595, 49613, 50082, 51510, 51744,
 52225, 52241, 52287, 52424, 52721,
 52991, 53068 53103.

BATTERIES, ETC.—contd.electrodes for accumulators, *see* Accumulators, etc., (Electrodes, etc.).electrodes for dry cells, *see* Dry cells.electrodes for primary cells other than dry cells, *see* Primary cells, etc., (Electrolytes, etc.).

Miscellaneous—

Carbon converting to electric energy, 46511.

Containers for battery. 46490.

Fuel cells. 46510.

Thermocouples. 52993, 53128.

plastic compositions for making electrodes, *see* PLASTIC COMPOSITIONS.

Primary cells, other than dry cells—

Components other than electrolytes, depolarisers, and electrodes. 48216, 51148.

Electrolytes, depolarisers, and electrodes forms and arrangements of. 50550, 51378, 52772, 53043, 53068.

reactivating dry cells, *see* Dry Cells.separators for accumulators, *see* Accumulators, (Electrodes, etc.).separators for primary cells, *see* Primary cells, (Components, etc.).Battery plates, *see* BATTERIES, ELECTRIC.Beacon lights flashing arrangement of, *see* SIGNALS, ETC.Beams and girders, *see* BUILDINGS, ETC.Beams fabricating, *see* METAL WORKING.**BEARINGS AND BEARING SURFACES. LIV(1).**

(This heading does not include jewel bearings, for which furniture, *see* CLOCKS, ETC. Furniture castors are indexed under FURNITURE.)

antifriction bearings for railway axles, other than construction of specific types of bearings, *see* Axle boxes, etc.

Axle boxes, railway vehicle. 46892, 47138, 48673, 50481, 50482.

Ball bearings. 52954.

bearing housings for mill rolls, *see* Miscellaneous, etc.bearings, making by pressing and sintering metal powders, *see* MOULDING, ETC.

BEARINGS, ETC.—contd.

- Bearings, other than ball, roller and axle-boxes. 46541, 47814, 48014, 48245, 49631, 50172, 50482, 50840, 50902, 51014.
- big end bearings for connecting rods, *see* Bearings, other than, etc.
- fluid bearings, *see* Bearings, other than, etc.
- journal bearing, *see* Bearings, etc.
- materials and compositions special, *see* Miscellaneous, etc.
- measuring lengths and clearances of bearings and their parts, *see* GAUGES, ETC.
- Miscellaneous, details applicable to bearings in general—
- Bearing housings. 49726.
- Bearing materials. 52234.
- oil seals for bearings of reciprocating members, *see* LUBRICATING.
- Roller bearings. 46848, 47021, 47309, 48398, 49611, 50172, 50618, 52954.
- rollers for supporting conveyor belts, *see* LIFTING, LOADING, ETC.
- spindle, bearings for, *see* Bearings, other than, etc.
- split journal bearings, *see* Bearings, other than, etc.
- thrust bearings for rotary shafts, *see* Bearings, other than, etc.
- Bearings for spindles of spinning and twisting frames, arrangement and disposition of spindles, *see* SPINNING, ETC.
- Bed stands, surgical, *see* FURNITURE.

BELLS, HORNS, WHISTLES AND THE LIKE. LX(1).

(This heading includes only the construction of bells and horns, etc. Arrangement of bells, etc., for definite purposes are indexed only under headings for such purposes, such as SIGNALS, MISCELLANEOUS; ELECTRIC SIGNALLING, ETC.)

Bells. 50383.

Diaphragm, plate, rod and tube vibrators (Excepting PHONOGRAPHS, ETC., TELEPHONES, ETC.). 49603.

diaphragms for loudspeakers, *see* TELEPHONES, ETC.

Fog and like warning horns (other than diaphragm, plate, and rod vibrators). No case.

BELLS, HORNS, ETC.—contd.

- plate vibrators, *see* Diaphragm, etc.
- Sound magnifying and directing appliances. No case.
- Whistles. No case.
- Belt conveyors, *see* LIFTING, ETC.
- Belt fasteners for power transmission balls, *see* MECHANISM MISCELLANEOUS.
- Belting fabric, coating with thermoplastic materials, *see* PROOFING, ETC.
- Belting compound fabric, *see* PROOFING, ETC.
- Belting, woven, *see* FABRICS, WOVEN.
- Belts, bands and rope for transmitting power, *see* MECHANISM, MISCELLANEOUS.
- Belts driving, *see* MECHANISM MISCELLANEOUS.
- Belts power transmission, *see* FABRICS, WOVEN.
- Bending metal pipes and tubes, *see* METAL WORKING.
- Bending metals, *see* METAL WORKING.
- Benzene thio sulphonates, *see* CARBON COMPOUNDS, ETC.
- Benzolc acid and derivatives, *see* CARBON COMPOUNDS, ETC.
- Benzophenones, *see* CARBON COMPOUNDS, ETC.
- Benzthiazole, *see* CARBON COMPOUNDS, ETC.
- Berthing places for ships, boats and other vessels, *see* HYDRAULIC ENGINEERING, ETC.
- Bevel gearing, *see* MECHANISM MISCELLANEOUS.

BEVERAGES, MALT PRODUCTS AND ORGANIZED FERMENTS (OTHER THAN AERATING BEVERAGES). XIV(2).

*(This heading does not include making of tea, coffee and like beverages for which, *see* DECOCTIONS, ETC. Milk and cream are indexed under FOOD, ETC. Steps in the process for the production of beverages involving improvements in cooling, heating, filtering, etc., are indexed under the headings denoting such operations.)*

alcoholic beverages, *see* Beverages, etc., (Ageing, etc.).

BEVERAGES, MALT PRODUCTS, ETC.—contd.

Beverages (including alcoholic beverages produced by fermentation)—
Ageing, maturing and purifying (other than tea coffee and like infusions, making and preparing). 46554, 47884.
Fermenting. 46484, 46907.
Fruit juices, extracts and syrups, lemonades. 46554, 48082, 49590, 49820, 52987.
Materials and compositions. 47236, 51691.
Wort producing and treating. No case.

Fusel oils. No case.

Malts and malting and malt extracts compositions. No case.

Miscellaneous. No case.

Yeast and other organised ferments (other than Bacteria, cultivating). No case.

Bibenzylene derivatives, *see* CARBON COMPOUNDS, ETC.

Bicycles, *see* CYCLES, ETC.

Bicycles, motor driven, *see* MOTOR VEHICLES.

Biguanides, *see* CARBON COMPOUNDS, ETC.

Binding agents and composition not containing rubber adhesives, *see* ADHESIVES, ETC.

Binding agents and compositions, containing India rubber, *see* INDIA RUBBER, ETC.

Binocular systems, *see* PHILOSOPHICAL, ETC.

Biocidal compositions, *see* DISINFECTING, ETC.

Bis-(4-aminophenoxy)-alkane derivatives, *see* CARBON COMPOUNDS, ETC.

Biscuits, making, *see* COOKING, ETC.

Bisethyleneimino hydroquinone, *see* CARBON COMPOUNDS, ETC.

Bis-triazylaminostilbene, *see* CARBON COMPOUNDS, ETC.

Bituminous compositions, other than bituminous emulsions, *see* PLASTIC COMPOSITIONS.

BITUMINOUS EMULSIONS. XXVII(1).

48760, 49729.

Blank crackers, *see* EXPLOSIVES, ETC.

Blankets printers', *see* PRINTING, ETC.

Blasting cartridges, charges, detonators fuses and tamping, *see* AMMUNITION, ETC.

Blasting compositions, *see* EXPLOSIVES, ETC.

Bleaching, dyeing and like fluid treatment of textiles, textile yarns and fibres, *see* DYEING, ETC.

Bleaching soaps and soap stocks, *see* SOAPS, ETC.

Bleaching textiles, *see* DYEING, ETC.

Blending of textile fibres, *see* SPINNING, ETC.

Blending or mixing liquids and solids, *see* MIXING, ETC.

Blinds, window, *see* FURNITURE.

Blinkers or moveable closures for openings, *see* DOORS AND WINDOWS, ETC.

Blocks, building and paving, *see* BRICKS, ETC.

Blocks signalling systems, railway, *see* RAILWAY SIGNALS, ETC.

Blood grouping, means for, *see* MEDICAL, ETC.

Blood, plasma substitutes, *see* DISINFECTING, ETC.

Blood serums, *see* DISINFECTING, ETC.

Blood transfusion apparatus, *see* MEDICAL, ETC.

Blotting pads, *see* BOOKS, ETC.

Blowers and compressors, other than centrifugal, screw and turbine type, *see* ROTARY, ETC.

Blowpipes, *see* BURNERS, ETC.

Boards, games, *see* GAMES, ETC.

Boards, artificial, *see* INDIA RUBBER, ETC.

Board, leather, *see* LEATHER.

Boards, moulding of, *see* MOULDING, ETC.

Boards, proofing, *see* PROOFING, ETC.

Boats, *see* SHIPS, ETC.

Bobbin changing devices for looms, *see* LOOMS.

Bobbins for looms, stripping mechanisms for, *see* LOOMS, ETC.

Bobbins for thread and yarns, *see* SPINNING, ETC.

Body, heating appliances for, *see* MEDICAL, ETC.

Body warmers, *see* MEDICAL, ETC.

Bogies motor vehicle, *see* MOTOR VEHICLES.

Bogies railway carriage, *see* RAILWAY, ETC., BODY, ETC.

Boiler furnaces, *see* FURNACES, ETC.

Boiler tubes, cleaning, *see* PIPES AND TUBES.

Boilers or steam generators, *see* STEAM GENERATORS.

Bolt fastenings for bags, boxes, portfolios and the like, *see* FASTENINGS, ETC.

BLOTS, STUDS, NUTS, WASHERS AND RIVETS. LXIV(1).

Bolts, studs, nuts and washers, construction of (other than those modified for locking).

46559, 47776, 50462, 51282, 51801, 52704, 53448.

Guns for shooting bolts and dowels into structures, *see* SMALL ARMS, ETC.

Locking by—

Devices, not otherwise provided for. 51038, 53376, 53448.

Grip between threads of nuts and bolts only. 53381.

Keys, pawls, rollers, balls, coiled springs and like. 51038.

Washers. 48182, 49967, 50532, 53141.

Miscellaneous—

Fixing bolts and dowels in structures. 47478.

Rivets. 48192, 48562.

Screw-sockets and bolt-hole bushes (including sockets and plugs for wood screws and nails). 53376.

washers, *see* Bolts, etc.

washers for locking hook bolts, *see* Locking, etc., (Washers, etc.)

Bonding electric cables, *see* ELECTRIC COUPLINGS, ETC.

Bonding resin compositions, *see* ADHESIVES, ETC.

Book binding, *see* BOOKS, ETC.

BOOKS, STATIONERY, SEALS, CIPHERS AND EDUCATIONAL APPLIANCES, XLII(2).

(Loose leaf books are indexed under FILING.)

blotting pads, *see* Stationery, etc.

book binding, *see* Books, etc.

Books, mercantile, forms and like. 49675, 49787, 50456.

counting devices for teaching, *see* Stationery, etc.

educational appliances other than books, *see* Stationery, etc.

envelopes, making, *see* BAGS, ETC.

gloves and orreries, *see* Stationery, etc. indexing and cataloguing, *see* Books, etc.

maps and charts, *see* Stationery, etc.

models, *see* Stationery, etc.

pads, calendar, *see* Stationery, etc.

slates, writing, *see* Stationery, etc.

Stationery, wafers, and seals, and codes and educational appliances (including albums, picture and picture frames). 46901, 47054, 47638, 47704, 48315, 48657, 48898, 48899, 49364, 49793, 51538, 51773, 52582, 53412.

storage installations for, *see* LIFTING, ETC.

teaching appliances, *see* Stationery, etc.

BOOTS AND SHOES. LXVI(1).

(For cutting and punching operations on shoe parts before assembling, *see* CUTTING, ETC.)

Apparatus for making and repairing.

47744, 47831, 48047, 49757, 49787, 53006, 53225.

Construction of (including methods of making).

46656, 46845, 47164, 48300, 48559, 48690, 48877, 49554, 49862, 50165, 51737, 51904, 51999, 52000, 52625.

heel shaping counters, *see* Apparatus, etc.

heels, *see* Construction, etc.

lasting machines, *see* Apparatus, etc.

Protectors, trees and other accessories for. 49012, 53119.

Bore-holes, *see* MINING, ETC.

Bore-holes, prospecting or exploring electrically, *see* MEASURING, ETC.

Boring earth and rock, *see* MINING, ETC.

Bottling liquids, *see* STOPPERING, ETC.

BOTTLES, JARS AND LIKE VESSELS XL(2).

(This heading comprises only vessels of glass and like vitreous materials, earthenware and stone-ware. Cold and heat retaining vessels are indexed under COOLING. Capsules, medical and like are indexed under DISINFECTING. Cruets and condiment receptacles are indexed under TABLE ARTICLES. Siphon bottles are indexed under AERATING.)

49997, 51210, 52249.

bottling, see STOPPERING, ETC.

closing, see STOPPERING, ETC.

ink pots, see WRITING, ETC.

opening, see STOPPERING, ETC.

siphon bottles, see SERATING, ETC.

washing, see WASHING AND CLEANING.

BOXES AND CASES. XL(3).

(This heading includes only constructions, fittings and details of containers for displaying, storing and transit of articles and materials. Casings intimately associated with particular articles and not of interest as containers for other articles such as Clock cases are indexed under the headings for the articles.)

Apparatus for making and finishing boxes and cases. 52276.

Boxes, and cases, other than folding, match and money boxes and letter boxes. 47869, 48244, 49067, 49083, 49518, 49865, 49872, 51090, 52391, 52530, 53057, 53331, 53418.

bread, pastry or cake boxes for table use, see TABLE, ETC.

Cases for card, tickets, stamps and like. No case.

coffins. No case.

containers for holding and dispensing tables and the like, see Miscellaneous.

fold-lines forming in boards and sheets for bending, in box-making, see Apparatus, etc.

Folding, collapsible or knock down cases and crates.

46876, 46877, 50886, 52255, 53057.

hat boxes, see Bags, etc.

Letter boxes and like. No case.

Match boxes, cigarette boxes and like boxes of drawer and shell type. 53088.

BOXES AND CASES.—contd.

Miscellaneous—

Containers with dispensing devices 46884.

Money boxes, specially designed for money.

No case.

Bracelets, see JEWELLERY.

Brackets, racks and stands, see FURNITURE.

BRAKES AND RETARDING APPARATUS. LV.

Actuated by hand or mechanical power (other than fluid pressure or electric), not forming part of the brake. 49097, 50554, 51613, 52635.

antiskid mechanisms for electrically controlled hydraulic brakes, see Fluid, etc., (Electric, etc.)

arresting grips retarders or friction apparatus fixed on railway permentway, see Miscellaneous.

brake actuating mechanisms for cycles, see CYCLES, ETC.

Brake block, shoes and like energy absorbing elements. 46814, 47593, 47629, 48425, 49045, 50176, 51133.

brake discs, see Brake blocks, etc.

braking internal combustion engines by valves in exhaust ducts, see INTERNAL, ETC.

braking motor vehicles by closing engine exhaust, see Miscellaneous.

car retarder control apparatus for classification yards, see Miscellaneous.

clearances maintaining, see Force, etc.

compensating wear of friction blocks shoes or linings and other energy absorbing elements of brakes, see Force, etc.

dynamic braking of electric motors, see MOTOR CONTROL, ETC.

Electric and magnetic brakes. 50388, 52763.

electrically controlled fluid pressure systems, see Fluid, etc.

electric Control means for hydraulic braking systems, see Fluid, etc., (Electrical, etc.)

exhausters for vacuum braking systems, see Fluid, etc. (Cylinders, etc.)

BRAKES AND RETARDING, ETC.—*contd.*

Fluid pressure actuated—

Cylinders, vacuum chambers, reservoirs and their appurtenances. 46489, 49957, 50774, 52337, 53288, 53417.

Drivers' and like valves (including emergency equalising and feeding valves).

46923, 47057, 50144, 51111, 51406, 51787, 51799, 52407, 52669, 52917, 53117, 53313.

Electric control. 47336, 48862, 49547, 52669, 53313.

Systems, details other than cylinders, valves and electric control.

47243, 48185, 48372, 48425, 48561, 49045, 49046, 49097, 50176, 50553, 50554, 50727, 51111, 52507, 52535, 52747, 53536, 52639, 52917, 53417.

foot operated brake transmission system for tractors, *see* Actuated, etc.

Force transmitting and equalising arrangements.

46674, 46714, 46847, 47057, 47124, 48185, 48284, 48425, 48949, 49045, 49046, 49420, 49521, 50176, 51111, 52123.

heat absorbing means for brake elements, *see* HEATING SYSTEMS, ETC.induced current brake, *see* Electric, etc.master cylinders for fluid pressure actuated brakes, *see* Fluid, etc., (Cylinders, etc.).

Miscellaneous—

Arresting grips retarders or friction apparatus fixed on railway permanent way. 49416, 49420.

Braking device for vehicles, engine exhaust controlling. 51759.

packings for master cylinders or hydraulic brakes, *see* Fluid, etc., (Cylinders, etc.).self adjusting mechanism for brakes, *see* Force, etc.self energizing mechanisms for single disc brakes, *see* Force, etc.slack adjusters, *see* Force, etc.track braking devices or retarders, railway, *see* Miscellaneous.**BRAKES AND RETARDING, ETC.**—*concl'd.*vacuum brake cylinders, *see* Fluid, etc., (Cylinders, etc.).vacuum brake ejectors means for operating, *see* Fluid, etc., (Drivers' etc.).valves for controlling fluid pressure actuated brakes, *see* Fluid, etc., (Drivers' etc.).variable leverage mechanism for fluid pressure braking apparatus, *see* Force, etc.variable load breaking mechanisms, *see* Force, etc.Brassiers, *see* DRESS, ETC.Breaking and iron and the like, apparatus for, *see* METAL WORKING.Braking yarns and threads, *see* SPINNING, ETC.Brazing and soldering, *see* METAL WORKING.Bread boxes or containers, for table use, *see* TABLE, ETC.Breaking and drafting filaments to form spun yarns, *see* SPINNING, ETC.**BRICKS, BLOCKS, SLABS, TILES AND POTTERY. XXV(1).**

Blocks, slabs and tiles (other than compounds).

46502, 46834, 46875, 47002, 47260, 47653, 47663, 47781, 48900, 49172, 49348, 49394, 49395, 49792, 49856, 49908, 50974, 51017, 51145, 52825.

Compositions and processes of making blocks, slabs and tiles.

46502, 46834, 48667, 48858, 48902, 49172, 49394, 49583, 49856, 50480, 52331, 52748, 53395.

Compound or composite blocks.

46984, 48711, 49856, 51989, 52719, 53433.

enamelling and enamels, *see* GLASS MANUFACTURE.firebricks, *see* Blocks, etc.metal sheets for roofing, *see* BUILDINGS, ETC.

Miscellaneous. No case.

moulding, *see* MOULDING, ETC.moulds for making, *see* MOULDING, ETC.

BRICKS, BLOCKS, SLABS, ETC.—contd.

Pottery, manufacture of. 48815, 50051, 52331.

refractory compositions for making, see CEMENT, ETC.

roofing tiles, see Block, etc.

Bricks, moulding, see MOULDING, ETC.

Briquettes, fuel, see FUEL, ETC.

Briquettes, moulding, see MOULDING, ETC.

Briquetting ores and the like, see ORES, ETC.

BRUSHING AND SWEEPING. XLIII(1).

47096, 47321, 48091, 48444, 50302, 52162, 52461, 53364.

Bucket elevators, see LIFTING, ETC.

Buckets, metal see HOLLOW-WARE.

Buckles and buckle like slides, see DRESS, ETC.

Buckles for trousers, see DRESS, ETC.

Buffers mounting and arranging in looms, see LOOMS.

Buffers, resilient, other than railway vehicle buffers, see SPRINGS, ETC.

Buffers, railway, see RAILWAY, ETC., BODY, ETC.

Building blocks, toy, see GAMES, ETC.

Building blocks, moulding, see MOULDING, ETC.

BUILDINGS AND STRUCTURES.

(Buildings sub-aqueous, such as caissons, cofferdams, and sluice gates are indexed under HYDRAULIC ENGINEERING).

anchoring wires to concrete pipes, see PIPES ETC.

applying wires under tension around concrete pipes, see PIPES, ETC.

artificial boards and like constructional material, see INDIA RUBBER, ETC.

awnings, see Tents, etc.

beams, see Girders, etc.

blocks, bricks and slabs, see BRICKS, ETC.

Bridges and aqueducts. 49906, 51016, 51911.

Buildings other than bridges, tents, and subaqueous buildings.

BUILDINGS AND STRUCTURES.

—contd.

Buildings other than, etc.—contd.

47349, 47463, 48151, 52023, 52530, 52969.

Casting and moulding *in situ*.

48403, 50305, 50316, 52020, 52549, 53336, 53388, 53423.

cement guns for delivering cement slurry, see Casting, etc.

centerings or temporary supports for concrete constructions, see Scaffolding, etc.

clamps for metal shutterings, see FASTENINGS, ETC.

clips for securing wall, ceiling and like boards to framework, see FASTENINGS, ETC.

coating walls or ceilings with cement slurry, see Plastering, etc.

Columns. 50542.

constructional materials, artificial boards and the like, see INDIA RUBBER, ETC.

cores for moulding hollow concrete beams, see MOULDING, ETC.

corn-silos, see BUILDINGS, ETC.

corrosion of concrete preventing, see CEMENT, ETC.

false work supports or carriers, see Scaffolding, etc.

floor covering, see Miscellaneous.

floor corrings, compound sheet materials for, see PROOFING, ETC.

Floors and ceilings (including roofs and roofing).

46589, 47653, 48289, 48403, 48450, 48581, 48711, 49353, 49395, 49488, 49905, 49906, 50721, 50724, 50854, 51016, 51158, 51669, 52654, 52825, 52969, 53019, 53099, 53404.

fluid proofing of structures, see Miscellaneous.

foundation piles, see PILES, ETC.

foundations, see Miscellaneous.

foundations, moulding *in situ*, see Casting, etc.

gaps and fissures in soils and structures, filling up, see Miscellaneous.

Girders and beams. 48711, 48847, 48981, 49434, 49435, 49707, 49905, 49906, 49986, 52969, 53351.

granaries, see Buildings, etc.

BUILDING AND STRUCTURES.

—contd.

gripping concrete bodies during prestressing devices for, *see* Reinforced, etc.

Ironwork, constructional metal plates, rods and bars (excepting those modified for use with special kinds of structures such as Reinforced concrete; SHIPS, ETC.)

47781, 47851, 48748, 48991, 49488, 49514, 49515, 49516, 49937, 50323
50724, 50751, 50800, 51577, 51739
52056, 52160, 52888, 53276, 53351
53375, 53376.

Joints Carpenters' (wood joints with interfitting parts). No case.

ladders, *see* Miscellaneous.

lining for roofs, *see* Floors, etc.

lining for walls, *see* Walls, etc.

Miscellaneous—

Compacting soils for foundation. 49092.

Filling gaps and fissures in structures and soils. 52549.

Floor coverings. 48758.

Foundations. 47259, 50316, 52032, 53194.

Ladders. 52909.

Panels and pambled works. 48900.

Preventing corrosion of concrete structures and bodies. 51658.

Props and shores for building. 47318.

Seals for joints between structures. 49323.

Strengthening reinforced structure. 50477.

Structural or reinforcing elements of wood. 51993.

Water proofing. 47355.

partitions, *see* Walls, etc.

Plastering. 50753, 52139, 53388, 53423.

Posts and poles. 48293, 50542, 52435.

prefabricated buildings, *see* Buildings, etc.

prestressed building elements construction of, *see* Reinforced, etc.

prestressed concrete, *see* Reinforced, etc.

quoins or corner units for walls, *see* Walls, etc.

rails for structural constructions, *see* Iron work, etc.

BUILDING AND STRUCTURES.

—conold.

Reinforced concrete and reinforcements (constructions of interest apart from structures made thereof).

47427, 48417, 48923, 49102, 49479
49880, 50161, 50477, 51016, 51030
51479, 51656, 51657, 51766, 52517
52745, 53021, 53194, 53404, 53440.

reinforced concrete roofs, *see* Floors, etc.

reinforced concrete walls. *see* Walls, etc.

reinforcement or prestressing wires winding on beams and other bodies, *see* METAL WORKING.

reinforcing structural components by externally wound wires, hoops or slings, *see* Miscellaneous.

roofs and roofing, *see* Floors, etc.

Scaffolding and staging. 49980, 49986, 51769, 51808, 53165.

seals for joints in foundation walls floors and like structures, *see* Miscellaneous.

sheet metal girders, *see* Girders, etc.

shuttering, systems, *see* Casting, etc.

silos, *see* Buildings, etc.

slabs *see* BRICKS, ETC.

space decks, *see* Floors, etc.

stabilizing structures by binding media settable *in situ*, *see* Casting, etc.

storage bins for granular, pulverulent and fluent solid materials in general, *see* Buildings, etc.

stressing wires, anchoring in prestressed concrete, *see* Reinforced, etc.

structural elements, metal, *see* Iron work, etc.

tensioning reinforcements of prestressed concrete bodies, *see* Reinforced, etc.

Tents and awnings. 48052, 49281, 50756.

towers for aerial transmission lines, *see* Posts, etc.

Walls and partitions. 47002, 47260, 47551, 48403, 48711, 49395, 49906, 49937, 50721, 50854, 51489, 51911, 52089, 52825, 53336.

Bunkers for locomotives, *see* LOCOMOTIVES, ETC.

Burettes and pipettes, *see* CHEMICAL PROCESSES, ETC.

BURNERS AND BURNER FITTINGS. XXX(1).

Atmospheric, incandescent lamp and like *i.e.*, in which combustible gas is mixed with air or carburant before reaching combustion zone).

46820, 47252, 47466, 47489, 47572, 47581, 47827, 48009, 48416, 49256, 49650, 49745, 50012, 51055, 51544, 52809, 52961, 53152, 53350.

Blow-pipe and like pressure type.

46641, 47581, 47786, 48081, 48191, 49720, 52874.

burners for combustion of gaseous reaction mixtures, *see* CHEMICAL PROCESSES, ETC.

combustion control apparatus for gas turbine and other installation, *see* Miscellaneous.

electric ignition systems for oil burners, *see* INTERNAL, ETC.

feeding pulverised fuel to gas turbine combustion chambers, device for, *see* Pulverised, etc.

fuel feeding and regulating devices, *see* VALVES, ETC.

fuel supply and control systems of stoves, *see* Miscellaneous.

high pressure oil burners, *see* Blow-pipe, etc.

incandescent lamp, burners for, *see* Atmospheric, etc.

mantles and supports therefor, *see* Atmospheric, etc.

Miscellaneous—

Combustion control apparatus for oil gas turbines. 49170.

Control devices for admitting fuel and air mixture. 53361.

Control devices for fuel and air supply means. 48466, 51749, 52387, 53360.

Photo flash lamp. 52651.

Open tray, spirit and like burners, without any special vaporising devices. No. case.

photographic flash, lamps magnesium and like, *see* Miscellaneous.

Pulverised fuel. 50942, 51055.

shut-off and control device for incandescent lamps, burners, *see* Atomospherics, etc.

Spray. 47572, 49720, 50474.

BURNERS AND BURNER, ETC.—*contd.*

Wick, with vaporising means. 47022, 47023, 48392, 49020, 51697.

Burners for combustion of gaseous reaction mixtures, *see* CHEMICAL PROCESSES, ETC.

Burring tools, *see* METAL WORKING.

Bust supporters, *see* DRESS, ETC.

Butt cutters, cane stalk, *see* AGRICULTURAL, ETC.

Butt-welding, *see* METAL WORKING.

Butter extracting from milk, *see* FOOD, ETC.

Butterfly valves, fluid flow control *see* VALVES, ETC.

Butyl alcohol, *see* CARBON COMPOUNDS, ETC.

By calcium phosphate, *see* CHEMICAL COMPOUNDS, ETC.

C

Cabinets, cup boards and like furniture, *see* FURNITURE.

Cabinets for electric switches, *see* ELECTRIC SWITCHES, ETC.

Cabinets for radio sets, *see* WIRELESS, ETC.

Cabinets for television receiver, *see* TELEGRAPHS, ETC.

Cabinets or boxes, *see* BOXES, ETC.

Cable joints, electric, *see* ELECTRIC COUPLINGS, ETC.

Cable tool drills, *see* MINING, ETC.

Cables, electric, *see* CONDUCTORS, ETC.

Calcium carbide, *see* CHEMICAL, COMPOUNDS, ETC.

Calcium chloride, *see* CHEMICAL COMPOUNDS, ETC.

Calcium gluconate obtaining by electrolysis, *see* ELECTROLYSIS, ETC.

Calcium nitrate, *see* CHEMICAL COMPOUNDS, ETC.

CALCULATING, COUNTING AND CASH REGISTERING APPARATUS. XLI(2).

accounting machines, *see* Cash, etc.

Calculating apparatus (other than for cash registers and statistical machines). 48160, 49007, 51306, 51950, 51951, 52340, 52567, 53077.

CALCULATING, COUNTING, ETC.—*contd.*

Cash and sales recorders and money delivering apparatus. 49969, 50168.

counters, *see* Counting, etc.

Counting apparatus. 47862, 47909, 48069, 48325, 48783, 49261, 49601, 49606, 49843, 50107, 50520, 50769, 50868, 51580, 52099, 52906, 52970, 53077, 53087.

calculating machines, statistical record card controlled, *see* statistical, etc.data checking apparatus for statistical and computing machines, *see* Statistical, etc.decoding units for statistical machines, *see* Statistical, etc.discharge tubes for storing or counting pulses, *see* VACUUM, ETC.electric counters, *see* Counting, etc.electronic counter circuits, *see* Counting, etc.keys for calculating machines, moulding *see* MOULDING, ETC.keys for typewriters, moulding, *see* MOULDING, ETC.magnetic storage devices with counter, *see* Counting, etc.pulse counter, *see* Counting, etc.pulse counters, discharge tubes for, *see* Counting, etc.pulse counting circuits, *see* Counting, etc.record card collating machines, *see* Statistical, etc.

Statistical machines. 46924, 47085, 47086, 48073, 49279, 49715, 49939, 50360, 50534, 51622, 51922.

Totalisators and like automatic wagering apparatus. 46639, 51860.

vehicles, device for counting the passage of, *see* Counting, etc.Calenders and date indicators, *see* INDICATING, ETC.Calibrating glass tubes by gauges, *see* GAUGES, ETC.Call bells or like signalling apparatus, electric, *see* ELECTRIC SIGNALLING, ETC.Camera tubes television, *see* VACUUM, ETC.Cameras, photographic, *see* PHOTOGRAPHY.Cams and tappets, *see* MECHANISM MISCELLANEOUS.Candle filters, *see* FILTERING, ETC.**CANDLES AND TAPERS. XXX(2).**

No case.

Cane juice clarifying of, *see* SUGAR.Cans, filling, *see* STOPPERING, ETC.**CAPACITANCES, RESISTANCES AND INDUCTANCES, ELECTRIC..LVIII(2)**asymmetrically conductive elements, *see* Resistances.capacitances and inductances means for simultaneously varying, *see* Condensers.capacitors, *see* Condensers.coils, high frequency, *see* Inductances.

Condensers. 46588, 47332, 47471, 48725, 49262, 49306, 49418, 49664, 49984, 50115, 50164, 50599, 51456, 51891, 51892, 52036, 52266, 52419, 52420, 53372.

cores for induction coils, *see* Inductances.dielectrics of condensers impregnating Compounds for, *see* CONDUCTORS, ETC.inductances and capacitances, means for simultaneously varying, *see* Inductances.

Inductances. 46469, 47517, 47750, 48880, 49664, 49831, 50260, 51687, 51698, 52543, 53002, 53410, 53437.

Resistances. 47985, 48050, 48445, 50654, 51274, 51386, 53410.

semi-conductors or thermistors, *see* ResistancesCapacitors, electric, *see* CAPACITANCES, ETC.Caps for bottles, *see* STOPPERING, ETC.Capsules medical and like, *see* DISINFECTING, ETC.Capsules for container closures, *see* STOPPERING, ETC.Capsules, moulding, *see* MOULDING, ETC.Car couplers, rail, *see* RAILWAY, ETC., VEHICLES, ETC.Car retarder control apparatus rail track, *see* BRAKES, ETC.Carbamate, ammonium, *see* CARBON COMPOUNDS, ETC.Carbanilates, *see* CARBON COMPOUNDS ETC.Carbides, *see* CHEMICAL COMPOUNDS, ETC.

Carbomycin, *see* DISINFECTING, ETC.

Carbon, activated, *see* NON-METALLIC, ETC.

Carbon black, *see* NON-METALLIC, ETC.

CARBON COMPOUNDS, ORGANIC. IX(1).

Excepting CELLULOSE; FATS, ETC.;
Fatty acids for soap making; Glucose,
Maltose, etc.; Gums, Oils (essential
mineral and tar; Starch and dextrin;
SUGAR; WAXES).

acetals, *see* Substitution, etc., (Oxygen,
etc., Aldehyde, etc.).

acetone, purifying by distillation, *see*
DISTILLING, ETC.

acrylonitrile, *see* Substitution, etc.,
(Nitrogen, etc.—Containing no ring,
etc.).

acrylonitrile polymers, *see* Resinous, etc.

aliphatic nitrile, *see* Substitution etc.
(Nitrogen, etc.,—Containing as ring
etc.).

amines, *see* Substitution, etc., (Nitrogen,
etc.).

amino salicylic acid phenyl ester, *see*
Substitution, etc. (Nitrogen etc.
—Containing aromatic, etc.).

amino salicylic acid salts, *see* Substi-
tution etc. (Nitrogen etc.,—Containing
Aromatic etc.).

androstenediol, *see* Substitution, etc.,
(Oxygen, etc., Hydroxy, etc.).

anthraquinhydrane, *see* Substitution, etc.
(Oxygen, etc., Ketonic, etc.).

anthraquinol, *see* Substitution, etc.,
(Oxygen, etc., Hydroxy, etc.).

anthraquinone dye, *see* Dyes, etc.,
(Dyes, etc.).

aryloxy phosphoric esters, *see* Substi-
tution, etc., (Oxygen, etc. Aldehyde,
etc.).

bisethyleneimino hydroquinone, *see*
Substitution, etc. (Nitrogen, etc.,
Containing heterocyclic, etc.).

caprolactam, *see* Substitution, etc.
(Nitrogen, etc., Containing heterocy-
clic, etc.).

caprolactam, polymerisation of, *see*
Resinous, etc.

carbamate, ammonium, *see* Substitu-
tion, etc., (Nitrogen, etc., Containing
no ring, etc.).

CARBON COMPOUNDS, ETC.—contd.

chromiferous azo dyes, *see* Dyes etc.
(Azodyes, etc.).

cobaltiferous azo dyes, *see* Dyes, etc.,
(Azodyes, etc.).

copolymers, compositions for preparing,
see Resinous, etc.

copper chlorophyll, *see* Organometallic,
etc.

dextran, *see* Miscellaneous.

diazoamido compounds, *see* Dyes, etc.,
(Azodyes, etc.).

dibenzylethylenediamine penicillin, *see*
Substitution, etc., (Nitrogen, etc.).

dicarnitine dichloride, *see* Substitution,
etc., (Halogen, etc.).

dichloroaceloxy aminopropenol, *see*
Substitution, etc., (Halogen, etc.).

Dyes and lakes—

Azodyes (for azo compounds which
are not dyes, *see* Substitution deri-
vatives, etc.).

46880,	47360,	47400,	47647,	47760,
47785,	47826,	47925,	47926,	48363,
48534,	48631,	49453,	49852,	50413,
50429,	51476,	51584,	51598,	51600,
51601,	52050,	52121,	52193,	52198,
52417,	52509,	52568,	52656,	52681,
52776,	52983,	53035,	53055,	53131.

Dyes, other than Azo dyes.	46491,
46954,	47166,
47820,	48183,
48195,	48269,
48367,	48468,
48861,	49620,
49925,	50628,
50961,	51182,
51231,	51294,
51685,	52029,
52291,	52351,
52453,	52899,
53186,	53187,
53424,	53425.

elemadienolic acid and derivative, *see*
Miscellaneous.

enzymes, *see* Miscellaneous.

fatty acids for soap and candle making,
see WAXES, ETC.

furfural, producing, *see* Substitution,
etc., (Oxygen, etc., Aldehyde, etc.).

genins, *see* Miscellaneous.

glycerol, *see* Substitution, etc., (Oxygen,
etc., Hydroxy, etc.).

glycosides of unspecified constitution,
see Miscellaneous.

halogen testanes, *see* Substitution, etc.
(Halogen, etc.).

Hydrocarbons and unsubstituted hetero-
cyclic compounds and their homo-
logues.

46483,	46554,	47075,	47240,	47373,
47549,	47608,	47824,	48048,	48149,

CARBON COMPOUNDS, ETC.—contd.**Hydrocarbons and unsubstituted, etc.—contd.**

48166, 48167, 48168, 48234, 48303,
48307, 48511, 48660, 48661, 49417,
49549, 49563, 49636, 50015, 50299,
50380, 50440, 50612, 50759, 50814,
50917, 51127, 51131, 51362, 51363,
51381, 51563, 51620, 52163, 52235,
52845, 52846, 52876, 52931, 52980,
53172, 53415.

hydroperoxides of hydrocarbons, *see*
Substitution, etc., (Oxygen, etc.,
Aldehyde, etc.)

indolines, *see* Substitution, etc., (Nitro-
gen, etc., Containing hetero, etc.)

isonicotinic acid, *see* Substitution, etc.,
(Nitrogen, etc.)

isonicotinic acid derivatives, *see* Substi-
tution, etc. (Nitrogen, etc.)

lactams, *see* Substitution, etc., (Nitrogen,
etc. Containing heterocyclic, etc.)

laevulinic acid esters, *see* Substitution,
etc., (Oxygen, etc., Aldehyde, etc.)

leuco sulphuric dyes, *see* Dyes, etc.,
(Dyes, etc.)

lignin, *see* Miscellaneous.

mercurated alkyl biuret compounds, *see*
Organo, etc.

metalliferous azo dyes, *see* Dyes, etc.,
(Azo dyes).

Miscellaneous—

Alkaloids of unknown structure,
48239, 50339, 50340, 51637, 53047.

Decolourising and purifying unspeci-
fied organic compounds. 46554.

Dextran. 49133.

Elemadienolic acid and derivatives.
46624.

Emetine. 52297.

Enzymes. 47130, 47255, 52670.

Genins. 48713, 48846.

Glycosides. 47108, 48714.

Humates. 53347.

Isolating protein. 47694.

Lignin. 46575, 46576, 52847

Nimbidin nimbin or nimbinin. 46947.

Proteins. 47694, 52318.

Reserpine acid and its derivatives.
49755.

Saponins of unknown constitution.
46945, 46946.

Serpentina alkaloids. 47806, 51467.

CARBON COMPOUNDS, ETC.—contd.**Miscellaneous—contd.**

streptomycylidene isomicotinyl hydra-
zine salts. 50101.

Vitamin B₁₂. 47406, 49570.

morphine derivatives not containing
halogen, *see* Substitution, etc., (Nitro-
gen, etc., Containing heterocyclic, etc.)

N-allyl normorphine, *see* Substitution,
etc., (Nitrogen, etc., Containing
heterocyclic, etc.)

nicotinic acid, *see* Substitution, etc.,
(Nitrogen, etc., Containing hetero-
cyclic etc.)

nimbidin, nimbin or nimbinin, *see*
Miscellaneous.

O-glycyl serine, *see* Substitution, etc.,
(Nitrogen, etc., Containing no ring,
etc.)

oestradiol, *see* Substitution, etc. (Oxy-
gen, etc., Hydroxy, etc.)

Organo metallic compounds. 47655,
49125, 51855, 52129.

oxosynthesis of aldehydes, *see* Substi-
tution, etc. (Oxygen, etc., Aldehyde,
etc.)

penicillin salts of N-phenyl—urethanes,
see Substitution, etc., (Nitrogen, etc.,
Containing heterocyclic, etc.)

penicillin esters of with alcohols
having secondary amino groups *see*
Substitution, etc., (Nitrogen, etc.,
Containing heterocyclic, etc.)

piperazines, *see* Substitution, etc.,
(Nitrogen, etc., Containing hetero-
cyclic, etc.)

piperidiones, *see* Substitution, etc.

polyamides, *see* Resinous, etc.

polymers, metal derivatives of; *see*
Resinous, etc.

pregnanes, halogenated, *see* Substitu-
tion, etc. (Halogen, etc.)

progesterone, *see* Substitution, etc.,
(Oxygen, etc., Ketonic, etc.)

pseudogenins, *see* Miscellaneous.

pyridine compounds, *see* Substitution,
etc., (Nitrogen, etc., Containing
heterocyclic, etc.)

pyrimidine derivatives containing halo-
gen, *see* Substitution, etc., (Halogen,
etc.)

pyrimidine derivatives not containing
halogen, *see* Substitution, etc., (Nitro-
gen, etc.).

CARBON COMPOUNDS, ETC.—*contd.*

quinoline derivatives, halogen substituted, *see* Substitution, etc. (Halogen, etc.)

reserpine, *see* Miscellaneous.

Resinous condensation and polymerisation products of undetermined structure.

46492, 46554, 46646, 46752, 46857,
46906, 47303, 47315, 47388, 47468,
47766, 47875, 48048, 48279, 48610,
48642, 58649, 58757, 58894, 49063,
49117, 49168, 49272, 49432, 49723,
49729, 49927, 50044, 50137, 50183,
50184, 50386, 50627, 50758, 50848,
50849, 50890, 50892, 50963, 51069,
51120, 51198, 51232, 51292, 51370,
51460, 51516, 51579, 51582, 51807,
51887, 51929, 51945, 52035, 52112,
52179, 52364, 52400, 52418, 52487,
52490, 52503, 52700, 52828, 52918,
52953, 53007, 53030, 53069, 53153,
53213, 53216, 53217.

salicylic acid amides containing halogen
see Substitution, etc., (Halogen, etc.)

saponins of unknown constitution, *see*
Miscellaneous.

steroids *see* Substitution etc.

sterols, *see* Substitution, etc.

styrene polymers, *see* Resinous, etc.

Substitution derivatives of hydrocarbons
and heterocyclic compounds other
than dyes—

Halogen, containing.

46462, 46495, 46499, 46505, 46518,
46521, 46531, 46532, 46587, 46595,
46609, 46680, 46681, 46725, 46731,
46759, 46764, 46767, 46791, 46804,
46879, 46915, 46997, 47026, 47032,
47060, 47091, 47103, 47118, 47248,
47250, 47251, 47398, 47399, 47538,
47552, 47557, 47575, 47578, 47579,
47610, 47675, 47676, 47715, 47718,
47719, 47740, 47783, 47842, 47856,
47883, 47923, 47960, 47961, 48071,
48083, 48084, 48111, 48133, 48134,
48135, 48143, 48170, 48304, 48314,
48354, 48355, 48356, 48364, 48395,
48408, 48413, 48535, 58600, 48605,
48668, 48743, 48744, 48789, 48797,
48798, 48809, 48823, 48831, 48886,
48895, 48896, 48917, 48921, 48943,
48958, 48962, 48977, 49002, 49003,
49005, 49009, 49125, 49130, 49164,
49184, 49195, 49196, 49198, 49211,
49248, 49286, 49411, 49440, 49473,
49474, 49475, 49480, 49529, 49537,

CARBON COMPOUNDS, ETC.—*contd.*

Substitution, etc.—*contd.*

Halogen containing—*contd.*

49550, 49570, 49617, 49633, 49645,
49719, 49759, 49797, 49798, 49802,
49806, 49807, 49821, 49863, 49871,
49876, 49898, 49930, 49946, 49960,
50026, 50064, 50100, 50112, 50113,
50114, 50154, 50246, 50251, 50343,
50368, 50426, 50433, 50434, 50186,
50537, 50575, 50613, 50620, 50647,
50649, 50669, 50692, 50699, 50707,
50733, 50757, 50796, 50839, 50861,
50894, 50910, 50925, 50927, 50928,
50938, 50941, 50984, 50985, 51001,
51039, 51041, 51073, 51115, 51118,
51134, 51140, 51163, 51166, 51171,
51172, 51175, 51194, 51261, 51333,
51357, 51381, 51382, 51384, 51422,
51467, 51493, 51499, 51500, 51507,
51508, 51512, 51551, 51564, 51598,
51600, 51601, 51623, 51642, 51651,
51712, 51725, 51823, 51829, 51845,
51857, 51866, 61877, 51944, 51958,
51974, 51980, 52003, 52009, 52033,
52052, 52066, 52067, 52094, 52127,
52128, 52161, 52190, 52221, 52240,
52272, 52274, 52281, 52286, 52328,
52338, 52452, 52464, 52504, 52550,
52551, 52555, 52596, 51598, 52599,
52600, 52638, 52676, 52699, 52701,
52755, 52765, 52778, 52780, 52796,
52822, 52862, 52864, 52873, 52915,
52942, 52943, 52945, 52982, 53028,
53055, 53079, 53108, 53122, 53179,
53202, 53211, 53240, 53281, 53316,
53397.

Nitrogen (but not containing halogen)—

Containing aromatic and hydroaromatic ring system, but not containing heterocyclic rings or sulphonamide or sulphonamide group in the molecule.

46472, 46480, 46505, 46595, 46610,
46651, 46653, 46676, 46797, 46979,
47032, 47185, 47186, 47187, 47198,
47207, 47248, 47249, 47337, 47368,
47378, 47379, 47398, 47399, 47578,
47579, 47585, 47610, 47632, 47675,
47676, 47692, 47740, 47880, 48084,
48134, 48135, 48143, 48301, 48302,
48304, 48306, 48314, 48354, 48355,
48356, 48364, 48494, 48523, 48585,
48803, 48824, 48825, 48839, 48938,
48939, 48962, 48977, 49011, 49019,
49077, 49084, 49085, 49130, 49219,
49318, 49334, 49411, 49422, 49499,
49543, 49645, 49698, 48777, 49858,
49876, 49888, 49960, 50114, 50138,
50224, 50393, 50693, 50710, 50711,

CARBON COMPOUNDS, ETC.—contd.**Substitution, etc.—contd.****Nitrogen (but not containing halogen)—contd.****Containing aromatic, etc.—contd.**

50757, 50861, 50885, 50894, 50910,
50970, 51039, 51042, 51073, 51194,
51208, 51316, 51341, 51387, 51598,
51600, 51601, 51642, 51681, 51692,
51760, 51857, 51974, 52009, 52953,
52068, 52127, 52128, 52161, 52272,
52434, 52452, 52550, 52580, 52599,
52600, 52601, 52606, 52699, 52700,
52796, 52915, 52942, 52943, 52945,
53055, 53079, 53100, 53102, 43108,
53179, 53195, 53240, 53241, 53397,

Containing heterocyclic ring system in the molecule, but containing no sulphonamide or sulphonamide group.

46479, 46495, 46496, 46505, 46521,
46568, 46587, 46595, 46616, 46618,
46619, 46681, 46682, 46725, 46747,
46759, 46767, 46782, 46804, 46828,
46864, 46879, 46933, 46956, 46994,
46997, 47017, 47018, 47026, 47095,
47103, 47148, 47192, 47201, 47248,
47294, 47367, 47552, 47553, 47575,
47578, 47579, 47596, 47684, 47709,
47740, 47783, 47842, 47960, 47961,
47974, 48016, 48017, 48084, 48133,
48158, 48176, 48179, 48218, 48252,
48295, 49304, 48306, 48314, 48340,
48344, 48355, 48413, 48587, 48621,
48624, 48652, 48688, 48770, 48771,
48798, 48803, 48823, 48824, 48860,
48864, 48886, 48917, 48921, 48958,
49003, 49005, 49009, 49048, 49063,
49070, 49084, 49085, 49129, 49164,
49184, 49185, 49196, 49240, 49248,
49276, 49346, 49411, 49473, 49474,
49480, 49536, 49543, 49545, 49553,
49580, 49581, 49617, 49633, 49652,
49665, 49689, 49690, 49697, 49698,
49719, 49730, 49754, 49782, 49795,
49797, 49798, 49806, 49807, 49858,
49863, 49941, 49960, 50026, 50049,
50087, 50099, 50112, 50113, 50154,
50227, 50246, 50249, 50255, 50256,
50272, 50393, 50405, 50406, 50407,
50415, 50495, 50530, 50531, 50537,
50575, 50577, 50594, 50613, 50614,
50625, 50647, 50649, 50656, 50669,
50672, 50699, 50707, 50925, 50926,
50927, 50928, 50941, 50983, 50984,
50985, 51001, 51002, 51041, 51115,
51134, 51140, 51168, 51194, 51199,
51261, 51262, 51326, 51333, 51341,
51381, 51382, 51384, 51477, 51493,
51500, 51504, 51505, 51508, 51551,

CARBON COMPOUNDS, ETC.—contd.**Substitution, etc.—contd.****Nitrogen (but not containing halogen)—contd.****Containing heterocyclic, etc.—contd.**

51598, 51600, 51601, 51615, 51623,
51632, 51677, 51681, 51683, 51781,
51794, 51845, 51855, 51857, 51864,
51866, 51944, 51981, 52009, 52033,
52079, 52190, 52203, 52227, 52328,
52351, 52409, 52441, 52463, 52464,
52474, 52519, 52520, 52528, 52551,
52596, 52701, 52744, 52765, 52779,
52803, 52822, 52862, 52864, 52868,
52873, 52896, 52918, 52944, 52958,
52988, 53028, 53100, 53102, 53122,
53145, 53211, 53236, 52240, 53281,
53317, 53366, 53424.

Containing no ring system in the molecule.

46643, 46680, 46832, 46979, 47109,
47118, 47602, 47603, 48201, 48202,
48248, 48394, 48494, 48668, 48708,
48860, 49088, 49334, 49483, 49894,
49903, 50046, 50212, 50224, 50244,
50470, 50472, 50576, 50596, 50620,
50621, 50658, 50885, 51006, 51007,
51008, 51009, 51010, 51011, 51073,
51633, 51684, 51699, 52047, 52452,
52552, 52676, 52779, 52803, 52880,
53352.

Sulphonamide or sulphonamide derivatives.

47010, 47849, 47850, 49482, 49898,
50212, 50590, 50643, 50839, 52191,
53240.

Oxygen (but not containing halogen and nitrogen)—**Aldehyde, ether, ester and other miscellaneous groups but not containing carboxylic, ketone and hydroxy groups.**

46483, 46535, 46536, 46537, 46870,
46893, 46927, 47051, 47244, 47249,
47267, 47283, 47288, 47368, 47373,
47510, 47715, 47892, 47959, 48080,
48170, 48279, 48303, 48358, 48395,
48429, 48469, 48538, 48638, 48704,
48788, 48791, 48803, 48844, 48873,
49375, 49417, 49569, 49637, 49774,
49836, 49951, 50136, 50178, 50212,
50213, 50287, 50451, 50609, 50662,
51131, 51285, 51412, 51486, 51844,
52054, 52136, 52176, 52189, 52230,
52240, 52333, 52580, 52828, 52876,
52880, 52914, 53079, 53432.

CARBON COMPOUNDS, ETC.—contd.Substitution, etc.—*contd.*Oxygen (but not containing halogen and nitrogen)—*contd.*

Carboxylic groups.

46632, 46742, 47084, 47091, 47249,
47368, 47916, 47997, 48278, 48292,
48303, 48405, 48413, 48629, 48791,
48803, 48934, 49244, 49319, 49417,
49695, 49841, 50035, 50114, 50623,
50683, 50785, 51028, 51039, 51360,
51448, 51741, 51760, 51816, 51844,
52068, 52167, 52189, 52273, 52341,
52876, 52950, 52965, 52997, 53213,
53432.

Hydroxy groups but not containing carboxylic and ketonic groups.

46483, 46829, 47075, 47288, 47368,
47373, 47509, 47510, 48170, 48262,
48270, 48271, 48303, 48429, 48458,
48469, 48580, 48609, 48704, 48788,
43791, 48803, 48946, 49024, 49375,
49417, 49461, 49463, 49475, 49540,
49610, 49637, 49692, 49778, 50034,
50138, 50178, 50213, 50287, 50321,
50328, 50631, 50662, 50743, 50744,
50785, 50890, 51131, 51163, 51226,
51285, 51334, 51363, 51483, 51713,
51832, 51880, 51977, 52090, 52189,
52286, 52290, 52293, 52329, 52557,
52828, 52845, 52846, 52876, 52931,
52984, 53309, 53310.

Ketonic anhydride and lactone groups but not containing carboxylic groups.

46626, 46746, 46777, 46829, 46908,
47090, 47091, 47250, 47251, 47268,
47364, 47368, 47376, 47509, 47510,
47777, 47916, 48278, 48292, 48303,
48434, 48458, 48469, 48535, 48538,
48609, 48791, 48918, 49024, 49298,
49375, 49417, 49461, 49463, 49534,
49537, 49734, 49744, 49777, 49801,
49802, 50022, 50034, 50096, 50136,
50162, 50178, 50287, 50328, 50662,
50701, 50785, 50864, 51032, 51131,
51163, 51285, 51334, 51335, 51359,
51360, 51447, 51448, 51449, 51712,
51713, 51760, 51809, 51810, 51977,
52068, 52090, 52240, 52281, 52286,
52290, 52352, 52450, 52454, 52466,
52534, 52828, 52876, 52950, 53130,
53147, 53295, 53402.

Sulphur, phosphorous, boron and other elements containing, but not halogen, nitrogen and oxygen. 51565.

terephthalic acid, *see* Substitution, etc. (Oxygen, etc., Carboxylic, etc.)**CARBON COMPOUNDS, ETC.—concl'd.**Substitution, etc. *contd.*toluic acid, *see* Substitution etc. (Oxygen etc. Carboxylic etc.)triazylamino—stibine, *see* Substitution, etc. (Nitrogen etc.)urea, *see* Substitution, etc., (Nitrogen, etc., Containing no ring, etc.)vitamin A ester, *see* Substitution, etc., (Oxygen, etc., Aldehyde, etc.)vitamin B₁, *see* Substitution, etc., (Nitrogen, etc., Containing heterocyclic etc.)vitamin compositions, *see* Vitamins.

Vitamins. 46851, 47406, 47425, 47677,
48002, 48710, 49470, 49477, 49570,
50014, 50169, 51032, 52203, 52914,
53059.

vitamins of known Constitution, *see* Substitution, etc.Carbon dioxide, *see* CHEMICAL COMPOUNDS, ETC.Carbondioxide, separating from gaseous mixtures otherwise by liquifaction *see* CHEMICAL PROCESSES, ETC.Carbon disulphide, *see* CHEMICAL COMPOUNDS, ETC.Carbonmonoxide, *see* CHEMICAL COMPOUNDS, ETC.Carbon paper, *see* TYPEWRITERS.Carbon transfer webs feeding through writing or recording machines, *see* WEBS AND SHEETS, ETC.Carbonaceous material coking, *see* COKING, ETC.Carbonaceous materials, coal and like containing sulphur and metals chlorinating, *see* ORES, ETC.Carbonising coal, *see* COKING, ETC.Carboxylic acids, *see* CARBON COMPOUNDS, ETC.Carburettors for internal combustion engines, *see* INTERNAL COMBUSTION, ETC.Card clothings of carding engines grinding, *see* POLISHING, ETC.Card controlled statistical machines, *see* CALCULATING, ETC.Carding engines, *see* SPINNING, ETC.

Carrier current transmission systems
wired wireless, *see* WIRELESS, ETC.

Carrier telegraph systems, *see* WIRELESS,
ETC.

Carrier wave signalling systems, high
frequency, *see* WIRELESS, ETC.

Carriers for condenser bobbins, *see*
SPINNING, ETC.

Carton or boxes, *see* BOXES, ETC.

Cartons or cylindrical and like paper or
cardboard containers, *see* HOLLOW
WARE.

Cartridge fuses *see* ELECTRIC COUPL-
INGS, ETC.

Cartridges ammunition, *see* AMMUNI-
TION, ETC.

Cartridges, blasting, *see* AMMUNITION,
ETC.

Cartridges for generating power gases,
see AMMUNITION, ETC.

Cash counters, *see* CALCULATING, ETC.

Cashew nuts, removing shells from kernels
see GRAIN, ETC.

Casing of centrifugal pumps, *see* CENTRI-
FUGAL, ETC.

Cast iron, *see* IRON AND STEEL, ETC.

CASTING METALS. XXXIII(3).

Casting machines and processes depend-
ant on such machines.

46560, 46932, 47206, 47225, 47741,
47810, 49278, 49444, 49571, 49844,
50241, 50518, 50525, 51533, 51534,
51535, 52538, 53421.

ejector device for casting moulds and
pattern, *see* Moulding, etc.

Flasks, and boxes, moulders. 47500.

hydraulic apparatus for stripping mould
cores, *see* HYDRAULIC PRESSES,
ETC.

Materials and linings for moulds and
cores.

46826, 47502, 48384, 48540, 49476,
49498, 53427.

Miscellaneous—

Clamping devices for moulding flask.
48956.

Mould cores, shipping. 52174.

Wheel. 49253.

CASTING METALS—*contd.*

Moulding machines. 47402, 47403,
47501, 47519, 47833, 48957, 49966,
50039, 50040, 50352, 50745, 52643,
52718, 53253, 53408.

moulding mixtures for foundry moulds,
see Materials, etc.

Moulds and cores. 46969, 47500, 47512,
48039, 48384, 48451, 48540, 49478,
49498, 50040, 51156, 51289, 51290,
51332, 51526, 51527, 52538, 53253,
53421, 53438.

moulds, making, *see* Moulding, etc.

Patterns. 53421.

pneumatic apparatus for stripping
mould cores, *see* HOT-AIR, ETC.

Processes of castings in general (not
dependant on any particular machine)
46853, 48888, 49498, 50512, 51528,
51543.

servo-motor control systems, pressure
liquid operated, for casting machines,
see HYDRAULIC PRESSES, ETC.

Casting resinous products, *see* MOULDING,
ETC.

Casting walls in situ, *see* BUILDING,
ETC.

Catalyst bases, *see* CHEMICAL PRO-
CESSES, ETC.

Catalysts *see* CHEMICAL PROCESSES,
ETC.

Catalysts, activation of, *see* CHEMICAL
PROCESSES, ETC.

Catalytic agents, preparation and treat-
ment of, *see* CHEMICAL PROCESSES,
ETC.

Cathode ray tubes, *see* VACUUM, ETC.

Cathode ray tubes, manufacture of enve-
lope of, *see* VACUUM, ETC.

Cathodes, dispenser *see* VACUUM, ETC.

Cathodes for electric discharge devices,
see VACUUM, ETC.

Cation exchange resins, *see* CARBON
COMPOUNDS, ETC.

Ceiling roses, *see* ELECTRIC COUPL-
INGS, ETC.

Cellular bricks blocks and slabs mould-
ing, *see* MOULDING ETC.

Cellular articles of clay moulding, *see*
MOULDING, ETC.

CELLULOSE (NON-FIBROUS) AND DERIVATIVES THEREOF (INCLUDING ARTIFICIAL FILAMENTS, SHEETS MADE FROM CELLULOSE PROTEIN AND LIKE SOLUTIONS). X.

(Steps in processes for production of cellulose and derivatives involving improvements in connection with bleaching, drying, filtering and moulding are indexed under headings denoting such operations.)

anti shrinkage treatment of cellular bodies, *see* Apparatus, etc.

Apparatus processes and compositions for making filaments and films, artificial silk and like textile products.

46461, 46492, 46608, 46655, 46684,
46772, 46774, 46805, 46922, 47042,
47058, 47174, 47200, 47528, 47539,
47555, 47660, 47695, 47725, 47726,
48208, 48263, 48290, 48291, 48406,
48507, 48577, 48641, 48671, 48729,
48894, 48937, 49110, 49117, 49163,
49167, 49213, 49383, 49410, 49427,
49428, 49429, 49430, 49431, 49501,
49624, 49694, 49799, 49846, 49883,
49928, 49947, 49955, 49989, 50036,
50204, 50384, 50491, 50505, 50629,
50947, 51048, 51081, 51135, 51141,
51152, 51203, 51254, 51339, 51376,
51561, 51668, 51694, 51784, 51785,
51971, 52194, 52355, 52356, 52400,
52416, 52487, 52522, 52569, 52644,
52725, 53034, 53056, 53142.

artificial fibres, spinning, *see* Apparatus, etc.

artificial filaments and films producing, *see* Apparatus, etc.

cellulose acetate fibres, *see* Apparatus, etc.

centrifugal spinning machines, *see* Apparatus, etc.

Conversion products, such as hydrocellulose and oxy-cellulose, obtaining (including preparatory treatment of cellulose for the production of cellulose derivatives and solutions of cellulose.)

No case.

crimping synthetic yarns and threads, *see* SPINNING, ETC.

delustering synthetic polymers in the production of yarns and the like, *see* Apparatus, etc.

Derivatives, other than esters and ethers (including solutions and dispersions thereof and articles made therefrom.)
No case.

CELLULOSE, ETC.—contd.

drawing or stretching of synthetic fibres, *see* Apparatus, etc.

Esters and ethers of cellulose (including solutions thereof and articles made therefrom).

47892, 47996, 48671, 50205, 51203, 51327.

fibres, synthetic, making of, *see* Apparatus, etc.

fibres treating with liquids and gases for modifying characteristics of, *see* DYEING, ETC.

filaments and fibres, synthetic, making of, *see* Apparatus, etc.

filaments crimping, *see* SPINNING, ETC.

filaments making from protein solutions *see* Apparatus, etc.

filtering device for spinning of synthetic polymers, *see* Apparatus, etc.

insolubilising artificial filaments, *see* Apparatus, etc.

melt spinning of filaments, *see* Apparatus, etc.

polymer solutions for making artificial fibres threads filaments, *see* Apparatus, etc.

polyvinyl solutions for making, filaments threads and fibres, *see* Apparatus, etc.

protein filaments, insolubilising, *see* Apparatus, etc.

spinning synthetic linear polymers, *see* Apparatus, etc.

stabilising crimps of a crimped fibres, *see* Apparatus, etc.

viscose, *see* Ester and ethers, etc.

Cellulose acetate fibres making *see* CELLULOSE.

Cellulose, fibrous, *see* PAPER.

Cellulose, obtaining from cellulosic materials, *see* PAPER.

Cellulose pulp, *see* PAPER.

Cellulosic materials bleaching, *see* DYEING, ETC.

CEMENT CONCRETE, PLASTER, ARTIFICIAL STONE, ASPHALT AND REFRACTORY MANUFACTURE. XXV(2)

Asphalts, (naturally occurring) preparation and treatment of. 49729.

bituminous, resinous, fatty, oily and like compositions plastic, *see* PLASTIC COMPOSITIONS.

CEMENT CONCRETE, ETC.—contd.

Cements, portland.

46735, 47176, 49254, 49326, 49583,
50173, 52767.

compacting soils plastic compositions
for, *see* PLASTIC, ETC.

concretes cellular, *see* Concrete, etc.

concrete, treating to prevent corrosion,
see Stone, etc.

Concretes and mortars, lime, magnesia
and magnesium carbonate and
cement.

46735, 47281, 47355, 48145, 49254,
50497, 50558, 52210, 52283.

Plaster, lime and chalk plastic composi-
tions. 47281, 49856, 50753.

Refractory substances for furnace lin-
ings and crucibles and for high
temperature purposes.

46834, 46875, 48456, 48858, 49199,
49344, 51114, 51224, 53395.

soils and storage bins for storing cement
and the like, *see* BUILDINGS, ETC.

slag wool preparation of, *see* Slags, etc.

Slags, treatment of.

48436, 49374.

Stone, artificial, and stone preserving
and colouring.

*(This heading comprises only composi-
tions fused together at high tempera-
tures. For compositions other than
those fused at high temperatures, see
PLASTIC COMPOSITIONS.)*

51658.

Cement guns and the like for deliver-
ing cement and concrete slurry for
construction, *see* BUILDINGS, ETC.

Cementing or lining bore holes, *see*
MINING, ETC.

Cementitious composition for making
building bricks and blocks, *see*
BRICKS, ETC.

Centerings or temporary supports for
concrete constructions, *see* BUILD-
INGS, ETC.

**CENTRIFUGAL AND SCREW FANS
AND PUMPS. XLIV(1).**

air extraction devices for centrifugal
pumps, *see* Centrifugal, etc.—
(Casings, etc.)

blade adjusting control devices for
centrifugal pumps, *see* Centrifugal,
etc. —(Casings, etc.)

CENTRIFUGAL, ETC.—contd.

casings and end-shields for centrifugal
fans, *see* Centrifugal, etc.

—(Casings, etc.)

casings and end-shields for screw fans,
see Screw fans, etc. —(Casings, etc.)

ceiling fans, electric motors for, *see*
DYNAMO, ETC.

Centrifugal fans and pumps—

Casings and structural details, other
than blades and driving gear.

47614, 48038, 48333, 48583, 49424,
49454, 49490, 49679, 49804, 50054,
50564, 52310, 53167, 53168.

Driving gear and regulating means.
47089.

Impeller blades, construction and
mounting of.

46545, 46726, 49454.

lubricating arrangements for fans and
pumps, *see* LUBRICATING.

oscillating mechanisms for electric table
fans, *see* Screw, etc. —(Casings, etc.)

Screw fans and pumps—

Casings and structural details other
than blades and driving gear.

47570, 48038, 49490, 50564, 53032.

Driving gear and regulating means.
47529.

Impeller blades, construction and
mounting of.

46545.

Centrifugal casting machines, *see* CAST-
ING METALS, ETC.

Centrifugal clutches, *see* MECHANISM-
MISCELLANEOUS.

Centrifugal filters for cleaning oil, *see*
FILTERING, ETC.

**CENTRIFUGAL MACHINES AND APPA-
RATUS (OTHER THAN FANS AND
PUMPS). XXXIV(1).**

*(This heading does not include CAST-
ING METAL; GLASS MANUFAC-
TURE; MOULDING, ETC; SPRAY
PRODUCERS.)*

butyrometers, *see* Density separators.

centrifugal oil cleaners, *see* Density,
etc.

cream separators, *see* Density, etc.

cyclone separators, *see* Density sepa-
rators.

CENTRIFUGAL MACHINES, ETC.—contd.

Density separators.

46473, 47135, 47885, 48881, 49074,
50376, 51162, 51245, 51377, 52471,
52570, 53202.

hydrocyclone separators, *see* Density,
etc.

Machines and separators other than
density and strainer separators, and
miscellaneous details.

48019, 48433, 48718, 49330, 53338.

Strainer separators. 52688.

Centrifugal spinning of artificial fibres and
filaments, *see* CELLULOSE, ETC.

Centrifuging machines, *see* CENTRIFU-
GAL MACHINES, ETC.

Cereals, husking, *see* GRAIN, ETC.

Chaff-cutters, *see* AGRICULTURAL, ETC.

CHAINS AND SHACKLES. LXIV(2).

51348.

Chain rings for key, *see* FASTENING,
ETC.

Chairs dental, *see* FURNITURE.

Chairs, furniture, *see* FURNITURE.

Channel terminating units for telephone
exchanges, *see* TELEPHONES, ETC.

Chapatti making machine for, *see* COOK-
ING, ETC.

Charging electric accumulators, *see* ELEC-
TRIC SUPPLY, ETC.

Charging electric storage batteries, *see*
ELECTRIC SUPPLY, ETC.

Charging furnaces and kilns, *see* FUR-
NACES, ETC.

Chassis, motor car, *see* MOTOR VEHI-
CLES.

**CHEMICAL COMPOUNDS, INORGANIC.
III.**

*(Steps in the production of inorganic
compounds involving improvements in
connection with condensing cooling,
crystallising, distilling, driving, filter-
ing grinding and crushing, mixing and
packing are indexed in headings denot-
ing such operations.)*

Acids not containing oxygen. 48849,
49851, 52381.

Alkali manufacture. 51782.

CHEMICAL PROCESSES, ETC.—contd.

Ammonia and ammonium compounds
and salts.

47650, 47724, 47941, 49532, 49857,
50271, 50324, 50404, 50473, 50715,
50917, 51411, 51641, 52122, 52165,
52480, 52787.

calcium nitrate, *see* Nitrates, etc.

carbon monoxide, *see* Oxides and oxy-
acids, etc.

Carbonates (excepting alkali metal).
No case.

carbendisulphide, *see* Compounds, etc.

Compounds, chemical, miscellaneous.

46557, 47835, 48588, 48677, 50833,
50878, 51034, 51263, 53214.

cupric oxide obtaining by electrolysis
see ELECTROLYSIS, ETC.

Cyanogen compounds and metallic deri-
vatives.

48371, 48432, 48810, 48860, 49788,
49808, 50324.

germanium oxide, *see* Oxides, hydrates,
etc.

Halides, metallic. 46585, 46685, 46740,
47640, 47771, 48424, 48452, 48776,
49234, 50202, 50203, 51263, 52619.

hydrogen peroxide, *see* Oxides and
oxyacids, etc.

Hypochlorites, metallic.
No case.

Nitrates, metallic.

47618, 47724, 48776, 48986, 51246,
51674, 52146, 52165, 53063.

Nitrides, metallic.
No case.

Oxides and oxy-acids, non-metallic.

46685, 46869, 48414, 48452, 48590,
48608, 48756, 48954, 49150, 49352,
49461, 49532, 49736, 49768, 49812,
50400, 50473, 50809, 50852, 50903,
51206, 51411, 51701, 51977, 51991,
52090, 52229, 52290.

Oxides, hydrates and oxy-acids.

46526, 46542, 46644, 46664, 47289,
49040, 49326, 49407, 50202, 50324,
51079, 51165, 51593, 51991, 52433,
52619, 52871, 53372.

Phosphates, metallic.

47645, 47646, 47696, 47735, 47817,
47941, 49178, 51126, 51235, 51925.

CHEMICAL COMPOUNDS, ETC.—concl'd.

phosphoric acid, *see* Oxides and oxyacids, etc.

potassium hydrogen sulphate, *see* Sulphate, etc.

red lead, *see* Oxides, hydrates, etc.

Salts, metallic, miscellaneous. 48677, 49123, 50150, 51263, 51991.

Silicates, metallic.

No case.

sodium nitrate, *see* Nitrates, etc.

Sulphates, metallic.

47597, 48499, 49150, 50324, 52167, 52619, 53390.

Sulphades, metallic. 46897, 49040, 52480, 52652.

Sulphites, metallic. 49197, 50539.

sulphur dioxide, *see* Oxides and oxyacids, etc.

sulphuric acid, *see* Oxides and oxyacids, etc.

sulphuric acid, electrochemical process for preparing, *see* ELECTROLYSIS, ETC.

titanium tetrachloride, *see* Halides, etc.

CHEMICAL PROCESSES AND APPARATUS. IV(1).

(*This heading includes only processes and apparatus for which no specific provision exists under the other key headings.*)

activating catalysts, *see* Catalytic, etc.

air treating of by radioactive ionizers, *see* Gas and vapour, etc.

Apparatus and processes depending upon apparatus for carrying catalytic reactions—

For reaction between gases and vapours.

47075, 47218, 48307, 48791, 48948, 50903, 51362, 51363, 51620, 51868, 52163, 53201.

Other than for reaction between gases and vapours.

46484, 48788, 49463, 50382, 51868.

Catalytic agents, preparation and treatment of. 46483, 46553, 46579, 46580, 47013, 47051, 47075, 47244, 47619, 47778, 47932, 48099, 48103, 48166, 48167, 48589, 49162, 49217, 49462, 49505, 49636, 49658, 49678, 50380, 50468, 50685, 50918, 51563, 51705, 51954, 51991, 52290, 52875, 52876, 52980, 53153.

CHEMICAL COMPOUNDS, ETC.—cont'd.

catalytic bases, *see* Catalytic agents, etc.

catalytic processes not depending upon any apparatus, for producing definite chemical compounds, *see* Headings for the compounds.

Colloidal solutions, dispersions and emulsions other than bituminous emulsions.

47366, 47980, 47983, 48144, 48649, 48837, 48879, 49162, 49630, 49773, 50483, 50622, 50747, 51063, 51251, 51304, 51331, 52660, 52963, 53125, 53206.

emulsifying agents, compositions, *see* Colloidal, etc.

emulsions, *see* Colloidal, etc.

exothermal chemical reactions accelerating or completing, *see* Miscellaneous, etc.

Gas and vapours, treating with electric discharges. 47184.

gas discharge vessels for treatment of work-pieces or carrying out chemical reactions, *see* VACUUM, ETC.

gaseous reaction mixtures, burner for effecting combustion, *see* Miscellaneous, etc.

gases separating into fractions, otherwise than by liquifaction, *see* Separating gas, etc.

gels, *see* Colloidal, etc.

irradiating apparatus, *see* Radiations, etc.

Liquid and gases separating. 49552, 53334.

Miscellaneous processes and apparatus—

Apparatus for carrying endothermic reactions. 50303.

Apparatus for generating and detecting neutrons. 48945, 51188.

Burners for effecting combustion of gaseous reaction mixtures. 47289.

Carrying out chemical reactions in cyclonic current. 47026, 47283.

Chemical reactions carrying in fluidized beds. 48851, 49123, 49710, 50382, 50685, 50942, 51666.

Chemical reaction in gaseous phase. 53201.

Diffuser for contacting gas and liquids. 46907.

CHEMICAL COMPOUNDS, ETC.—*contd.*

Miscellaneous, etc.—*contd.*

- Effecting double conversions between solutions of ionigenic substances. 48512.
- Extracting solute from solute bearing material with solvent. 47061.
- Feeding materials in reactors. 46873.
- Froth breaking apparatus. 49718.
- Gas production by wet method. 49618.
- Gases separating by adsorption. 52235.
- Liquid and gaseous media co-reacting. 47365, 51639, 52480.
- Liquid solutions and suspensions, modifying chemical constitution of. 51371.
- Mixing liquids of different phases. 52248.
- Nuclear reactors. 53161.
- Plant extracts aqueous obtaining. 51575.
- Polymerisation apparatus. 52503.
- Process of continuous preparation of chemical product. 51645.
- Purifying liquids containing colloids. 46554.
- Regeneration of ion exchangers. 48254.
- Separating optical antipodes from racemic substances. 48135.
- Separating organic compounds by complex formation. 49572, 50046.
- Solvent extraction. 46714, 49995.
- Vapours and liquids reacting apparatus. 49165.
- radiation processes, not depending upon any apparatus for producing definite chemical compounds, *see* Headings for the compounds.
- Radiations, treating substances with for effecting chemical reactions and sterilisation, apparatus and processes depending upon such apparatus. 46718, 47205, 52245.
- reactions between solids in fluidised state catalytic, *see* Apparatus, etc. (Other than, etc.)

CHEMICAL PROCESSES, ETC.—*contd.*

- reactions between solids in fluidised state other than catalytic, *see* Miscellaneous, etc.
- reduction and activation of catalysts, *see* Catalytic agents, etc.
- regeneration of ion exchangers, *see* Miscellaneous.
- Separating mixtures of gases (excepting air and gases liquefying). 48305, 48473, 49056, 49138, 49532, 49995, 52343, 53334, 53450.
- Testing and gas analysis. No case.
- water dispersible solid compositions, *see* Colloidal, etc.
- Cheque forms, *see* BOOKS, ETC.
- Cheque writer printing apparatus, *see* PRINTING.
- CHIMNEYS AND FLUES. XXVI(2).**
- 47470.
- Chimneys for lamps, *see* LAMP-CHIMNEYS, ETC.
- Chisels, *see* HAND TOOLS.
- Chloramphenical, *see* CARBON COMPOUNDS, ETC.
- Chlorine obtaining by electrolytic processes, *see* ELECTROLYSIS, ETC.
- Chlorophyll and its derivatives, *see* CARBON COMPOUNDS, ETC.
- Chlorotetracycline, *see* CARBON COMPOUNDS, ETC.
- Chocolates making, *see* FOOD, ETC.
- Choke coils, *see* CAPACITANCES, ETC.
- Choladienes, *see* CARBON COMPOUNDS, ETC.
- Chromiferous azo dyes, *see* CARBON COMPOUNDS, ETC.
- Chucks, *see* METAL WORKING.
- Churning machines, *see* MIXING, ETC.
- Cigarette holder, *see* CIGARS, ETC.
- Cigarette holding and delivering apparatus, *see* CIGARS, ETC.
- Cigarette lighters, *see* LAMPS FOR LIGHTING, ETC.
- Cigarette packets or carbons, *see* BOXES, ETC.

CIGARS, CIGARETTES AND SMOKER'S APPLIANCES AND TOBACCO MANUFACTURE. XVI.

- cigarette holders, *see* Smokers, etc.
- Cigarettes and cigarette making machines and appliances—
- Apparatus and details, unclassified. 46633.
- Cigarettes. 46633, 51793, 52493.
- Continuous-rod type of machines.
- No case.
- Cutting and trimming mechanisms.
- No case.
- Feeding tobacco (including opening and picking) and delivering cigarettes in orderly arrangement. 47872, 47873.
- Cigars and cheroots and cigar making machines.
- No case.
- damping tobacco, *see* Tobacco, etc.
- filter tips for cigarettes, *see* Cigarettes, etc.—(Cigarettes).
- Smoker's accessories (ash trays, pipes, cigarette holders, pouches, smoking devices).
- 50749, 51112, 51298.
- tobacco, drying, *see* DRYING, ETC.
- tobacco, manufacture of and tobacco substitutes and smoking mixtures. 46776, 46861, 47356, 48727.
- Cinema projectors, sound translating means for, *see* PHONOGRAPHS, ETC.
- Cinematographic cameras, *see* PHOTOGRAPHY.
- Cinematographic films, *see* PHOTOGRAPHY.

CINEMATOGRAPHY. XXXVIII(1).

(This heading does not include cinematographic picture films and lantern slides for which *see* PHOTOGRAPHY.)

casings, *see* Frames, etc.

change-over apparatus or control apparatus for shutters and switches, *see* Shutters, etc.

cinematographic films, imbibitions printing of, *see* PRINTING.

Colour cinematography.

46594, 47000, 47939.

cooling devices for motion picture projector, *see* Miscellaneous.

CINEMATOGRAPHY, ETC.—contd.

Film winding and storing means. 47773.

filters for colour cinematographic projection, *see* Colour cinematography.

Frames and casings (including arrangement of parts therein). 46999.

Gates and exposure-position film carriers and film centring. No case.

Intermittent-feed mechanisms. 47063.

Miscellaneous—

Cooling devices for motion picture projectors. 47105.

Shutters and automatic control devices for cut-off shutters, switches and signals (including films modified for use therewith).

46596, 46597, 46598, 46599, 46600, 47104, 50357, 51723.

Stereoscopic and relief effects-producing.

50190, 51723.

three-dimensional effect producing cinematography apparatus, *see* Stereoscopic, etc.

Circuit breakers, electric, *see* ELECTRIC SWITCHES, ETC.

Circuit interruptors or switches, electric, *see* ELECTRIC SWITCHES, ETC.

Circular looms, *see* LOOMS.

Circular trimming knives, *see* CUTTING, ETC.

Cisterns flushing for sanitary purposes, *see* CLOSETS, ETC.

Clamps for coupling or securing ropes and cords, *see* ROPES, ETC.

Clamps for securing and supporting for cables, *see* CONDUCTORS AND, ETC.

Clamps for securing and supporting ropes, *see* ROPES, ETC.

Clamps for securing rim to wheel body, *see* WHEELS, ETC.

Clamps or fastenings, *see* FASTENINGS, ETC.

Clamps or vices, *see* HAND TOOLS.

Clarifying of sugar juices by chemical methods, *see* SUGAR.

Clarifying sewage tanks for, *see* SEWAGE, ETC.

Clarifying unspecified liquids, *see* FILTERING, ETC.

Clasp fasteners, *see* FASTENING, MISCELLANEOUS.

Classifying or grading solids by wet processes, *see* WASHING GRANULAR, ETC.

Cleaning Cotton, *see* SPINNING, ETC.

Cleaning or picking metals, *see* INCRUSTATION, ETC.

Clips for fountain pens pencils and the like, *see* WRITING, ETC.

Clips and clamps, fastenings, *see* FASTENINGS, MISCELLANEOUS.

CLOCKS AND WATCHES. XLI(4).

47649, 48005, 50032.

CLOSETS, BATHS AND LIKE SANITARY APPLIANCES. II(1).

Baths. 51085.

baths and sinks adapting as clothes or textile washing machines, *see* DYEING, ETC.

Closets, sanitary—

Constructional features, other than seats, etc.

47390, 50083.

Seats, seat guards, seat lids and seat backs.

47390.

Commodos, bed pans and chamber pots.

No case.

dust bins, *see* Miscellaneous, etc.

flushing means for urinals, *see* Urinals.

Lavatory basins and sinks. 51085.

Miscellaneous appliances.—

Dust bins. 47699.

Urinals. 49363.

Water waste preventing cisterns, flushing and like—

Combined valve and siphon discharge and miscellaneous details. No case.

Siphon discharge only. 50275.

Valve discharge only. No case.

Closure flanges for containers, *see* STOPPERING, ETC.

Closure seals for containers, *see* STOPPERING, ETC.

Closures and closure retaining devices, bottles jar and like, *see* STOPPERING, ETC.

Closures or lids, forming light joints, for cans and like containers, *see* STOPPERING, ETC.

Cloth beams, *see* LOOMS.

Clutches for conveying rotary motion, friction, *see* MECHANISM MISCELLANEOUS.

Clutches, friction, *see* MECHANISM, MISCELLANEOUS.

Clutches, hydraulic, *see* HYDRAULIC PRESSES, ETC.

Coal, agglomerating, *see* FUEL, ETC.

Coal, carbonising, *see* COKING, ETC.

Coal, concentrating by flotation and like processes, *see* WASHING GRANULAR, ETC.

Coal, conveying, *see* LIFTING, ETC.

Coal cutter chains, *see* EXCAVATING.

Coal, extracting from earth, *see* EXCAVATING.

Coal getting or mining, *see* EXCAVATING.

Coal grinding or pulverizing, *see* GRINDING, ETC.

Coating or painting surfaces electrostatically, *see* PAINTS, ETC.

Coating compositions, *see* PAINTS, ETC.

Coating compositions, pesticidal, *see* PROOFING, ETC.

Coating compositions drying by exposure, *see* PAINTS, ETC.

Coating compositions resinous, *see* PAINTS, ETC.

Coating cork with moisture proofing compositions, *see* PROOFING, ETC.

Coating fabrics with resinous compositions, *see* PROOFING, ETC.

Coating metallic surfaces for preventing corrosion, *see* INCRUSTATION, ETC.

Coating metals otherwise than by electrodeposition, *see* TANNING, ETC.

Coating surfaces other than those of continuous lengths of flexible materials with paints lacquers and like, *see* PAINTS, ETC.

Coating electric discharge lamps tubes with fluorescent materials, *see* LUMINESCENT, ETC.

Coating webs, sheets and like long continuous carriers with liquid compositions, *see* PROOFING, ETC.

Cobalamines, *see* CARBON COMPOUNDS, ETC.

Cobalt oxides hydrates and salts, *see* CHEMICAL COMPOUNDS, ETC.

Cobalt phthalocyanine, *see* CARBON COMPOUNDS, ETC.

Cobaltiferous azo dyes, *see* CARBON COMPOUNDS, ETC.

Cocks fluid flow regulating, *see* VALVES, ETC.

Coffee percolators, *see* DECOCTIONS, ETC.

Coffee preparations, *see* TEA, ETC.

Coiling and winding metal strips, *see* METAL WORKING.

COINFREED APPARATUS. XLI(3).

(Coin and check freed telephone systems, other than construction of coin and check operated freeing mechanism are indexed under TELEPHONES).

Coin testing and fraudulent actuation, preventing, apparatus for. No case.

Delivery of articles (including delivery of coins for change giving), apparatus for.

49452.

dispensing by confreed mechanism, *see* Delivery, etc.

Fluids and electricity delivery of, by clock work, meter or otherwise. 51375.

Franking and postmarking apparatus for.

No case.

Miscellaneous.

No case.

Telegraph and telephone apparatus.

No case.

Coked briquettes, *see* COKING, ETC.

Coke-ovens, *see* COKING, ETC.

COKING AND GAS PRODUCERS. XXXII(1).

coke-ovens, *see* Ovens, coke, etc.

Coking processes, not depending upon any particular type of apparatus.

47300, 47846, 48076, 48778, 48893,
49015, 49402, 49403, 49459, 50187,
50734, 50991, 52429, 52836.

COKING, ETC.—*contd.*

Gas producers.

46471, 46677, 47630, 47835, 49853,
50133, 50193, 50346, 50349, 50929,
51284, 53435.

gases separating by liquifaction, *see* AIR, ETC.

gasification of coal-dust, *see* Gas producers.

germanium, recovering from coal carbonisation products, *see* METALS EXTRACTING, ETC.

Miscellaneous—

Cooling coke from coke ovens. 52558.

Oscillatory, reciprocatory and rotary retorts.

No case.

Ovens, coke (flue-heated).

47300, 47452, 47821, 49641, 52117,
53118.

producer gas separating by adsorptor, *see* CHEMICAL PROCESSES.

Retorts, other than oscillatory, reciprocatory and rotating. 46806, 49701, 50691.

Colchicine and its derivatives, *see* CARBON COMPOUNDS, ETC.

Cold cathode electric discharge devices, *see* VACUUM, ETC.

Cold gas refrigerators, *see* COOLING, ETC.

Cold retaining vessels, *see* COOLING, ETC.

Cold working of metals for modifying their character, *see* ANNEALING, ETC.

Collapsible containers, *see* HOLLOWWARE.

Collars for personal wear, *see* DRESS, ETC.

Collets for machine tools, *see* METAL WORKING.

Colloidal compositions, *see* CHEMICAL PROCESSES, ETC.

Colloidal dispersions of metal in water, *see* CHEMICAL PROCESSES, ETC.

Colloidal dispersions of silica depositing on fibres, *see* DYEING, ETC.

Colloidal solutions preparing, *see* CHEMICAL PROCESSES, ETC.

Colour cinematographic projection apparatus, *see* CINEMATOGRAPHY, ETC.

Colour filters, optical, *see* PHILOSOPHICAL, ETC.

Colour images, photographic reproduction of, *see* PHOTOGRAPHY.

Colour phototography, *see* PHOTOGRAPHY.

Colour printing mechanical, *see* PRINTING.

Colour printing or ornamentation of rubber surface, *see* INDIA RUBBER, ETC.

Colour television, *see* TELEGRAPHS, ETC.

Column, stills and fractional condensation apparatus, *see* DISTILLING.

Combs, *see* TOILET, ETC.

Combustible jelly, hydrocarbons, *see* FUEL, ETC.

Combustion devices for gas turbines, *see* BURNERS, ETC.

Combustion system, gas turbines, *see* BURNERS, ETC.

Combustion turbines, *see* TURBINES, ETC.

Comminuting or pulverising materials, *see* GRINDING, ETC.

Commutators for dynamo-electric machines, *see* DYNAMO-ELECTRIC, ETC.

Compacting soil to pastymass, plastic compositions for, *see* PLASTIC, ETC.

Composite sheet materials, textile, cellulose, asbestos and the like, *see* PROOFING, ETC.

Compositions containing rubber, *see* INDIA RUBBER, ETC.

Compositions, proofing, *see* PROOFING, ETC.

Compound fabrics and sheet materials, *see* PROOFING, ETC.

Compressed air or gas engines or motors, *see* HOT-AIR ETC.

Compression refrigerating system, *see* COOLING, ETC.

Compression stills, *see* DISTILLING, ETC.

Compressors, air and gases, *see* AIR AND GASES, ETC.

Compressors, bladed turbine type, *see* TURBINES, ETC.

Compressors, centrifugal, *see* CENTRIFUGAL, ETC., PUMPS.

Compressors, turbo, *see* TURBINES, ETC.

Concentrating liquids by evaporation, *see* DISTILLING, ETC.

Concrete articles moulding, *see* MOULDING, ETC.

Concrete building structures casting in situ, *see* BUILDINGS, ETC.

Concrete cellular, *see* CEMENT, ETC.

Concrete pipes, *see* PIPES, ETC.

Concrete pipes moulding, *see* MOULDING, ETC.

Concrete walls, *see* BUILDINGS, ETC.

Concretes, *see* CEMENT, ETC.

Condensation products resinous, *see* CARBON COMPOUNDS, ETC.

Condensers for textile rovings, *see* SPINNING, ETC.

Condensing fibres, *see* SPINNING, ETC.

Conditioning food products, *see* FOOD, ETC.

CONDUCTORS AND INSULATORS ELECTRIC. LVIII(3).

anchoring armoured cable to apparatus housing e.g. submarine repeater, *see* Laying, etc. Suspending, etc.

apparatus for applying insulants to cable wires, *see* Cables, etc., (Miscellaneous).

cable joints, *see* ELECTRIC COUPLINGS, ETC.

Cables and conductors—

Armouring (including protecting and preserving core insulation with non-metallic coverings).

46586, 46673, 46785, 47924, 49556, 49594, 50019, 50566, 51552, 51560, 51665, 52076, 52096, 52515.

Arrangement and disposition of constituent parts.

46673, 46839, 47099, 47150, 47924, 48732, 48901, 49259, 50943, 53356.

Conductive materials and cores for. 46962, 47099, 48456, 50992, 51101, 51119.

Miscellaneous—

Cable terminations. 52423.

Covering wires and conductors with insulating materials. 47888, 48074, 48514, 48935, 49503, 49259, 49753, 50566, 52303, 53254, 53403.

CONDUCTORS, ETC.—contd.Cables and conductors—*contd.*Miscellaneous—*contd.*

Marking cables and wires. 53445.

Protecting covering for metals sheaths. 47415.

With auxiliary conductors. No case.
co-axial cables construction of, *see* Cables, etc.composite conductors, *see* Cables, etc., (Arrangement, etc.).

Conduits and casings, specially designed for cables and conductors. No case.

covering corrosion-protective for cables *see* Cables, etc., (Armouring, etc.).covering wires and conductors with insulating materials, *see* Cables, etc., (Miscellaneous).dielectrics of cables, impregnating compound for, *see* Insulating materials.enamels for resistors, *see* Insulating materials, etc.extruding insulation coverings on cable cons, *see* MOULDING ETC.forming cavities in glass insulators, *see* GLASS MANUFACTURE.forming or printing conductors on insulators, *see* Laying, fixing, etc., (Miscellaneous).holder for flexible cables of electric irons and other domestic appliances, *see* Laying, etc., (Miscellaneous).impregnating compound for insulating cables, *see* Insulating, etc.insulating coatings, forming on wires, *see* Cables, etc., (Miscellaneous).insulating coverings for cables, *see* Cable, etc. (Miscellaneous).

Insulating materials.

47843, 48514, 48536, 48935, 49418, 49425, 49458, 49548, 49594, 50943, 51154, 51696, 52111, 52303, 52362, 52385, 52408.

insulating sleeves for terminations of high voltage cables, *see* Cables, etc. (Misc.).lapping strips on conductors, *see* cables, etc., (Armouring, etc.).

Laying, fixing, suspending and supporting cables and conductors—

Insulators (including means for securing insulators together or to support). 53373.

Laying, erecting and repairing. 52905.

CONDUCTORS, ETC.—contd.Laying, etc.—*contd.*

Miscellaneous—

Forming conductors on insulators. 48051.

Holders for flexible cables or flexes. 46574.

Laying conductive filaments on sheet materials 49160.

Sealing conductors in submesible repeater housings. 51098, 51099, 52307.

Suspending and supporting.

46508, 49484, 51045, 51318, 52306, 52967, 52968, 53031.

Wire tensioning apparatus. 49525.

protective coverings for cables, *see* Cables, etc. (Armouring, etc.).sheaths electric cables, *see* Cables, etc., (Armouring, etc.).stranding or twisting cables, plants for, *see* METAL WORKING.towing device for applying sheath to cables, *see* Cables, etc., (Armouring, etc.).turnbuckles for stretching and supporting, insulators strings from supports, *see* Laying, etc.—Insulators, etc.Conductors insulating materials for, *see* CONDUCTORS, ETC.Conduits and culverts, *see* DRAINS, ETC.Cone friction couplings, *see* MECHANISM MISC.Confectionery and sweetmeats, *see* FOOD, ETC.Connecting devices for electric conductors and cables, *see* ELECTRIC COUPLING, ETC.Connecting strips for telephone selector switches, *see* TELEPHONES, ETC.Contact assemblies for electric switches, *see* ELECTRIC SWITCHES, ETC.Contact breakers and like, electric switches, *see* ELECTRIC SWITCHES, ETC.Contact or coupling devices electric, *see* ELECTRIC COUPLINGS, ETC.Contact members for electrode, switch, *see* ELECTRIC SWITCHES, ETC.Contacting gaseous fluid with solid catalysts for chemical reaction, *see* CHEMICAL PROCESSES, ETC.

Contactors for electric switches, *see* **ELECTRIC SWITCHES, ETC.**

Container closures, *see* **STOPPERING, ETC.**

Containers, casks barrels and the like, *see* **HOLLOW-WARE.**

Containers or cases, *see* **BOXES, ETC.**

Containers, collapsible tube, *see* **HOLLOW WARE.**

Containers for battery, *see* **BATTERIES, ETC.**

Containers for bread, cake, pastry or the like for table use, *see* **TABLE, ETC.**

Containers or cones, *see* **HOLLOW WARE.**

Contraceptives, *see* **MEDICAL, ETC.**

Control system for electric motors, *see* **MOTOR CONTROL, ETC.**

Control systems for electrically driven mine winders, *see* **MOTOR CONTROL, ETC.**

Converting alternating and direct electric currents, *see* **ELECTRIC, CURRENTS, ETC.**

Conveying and loading powder materials, *see* **LIFTING, ETC.**

Conveying and handling loose materials in bulk, *see* **LIFTING, ETC.**

Conveying pulverulent material, *see* **LIFTING, ETC.**

Conveyors and elevators, *see* **LIFTING, ETC.**

Cookers, *see* **COOKING, ETC.**

COOKING, BAKING AND KITCHEN APPLIANCES. XV(1).

(This heading comprises only the apparatus and utensils indicated by the sub-headings. Sauce pans, pails and like hollow-ware are indexed under HOLLOW-WARE).

biscuits making, *see* **Bread, etc.**

Bread, biscuit, cakes and pastry, making. 47505, 52753.

Cooking apparatus, field, camp and like. 46981, 47231.

dough rolling apparatus, *see* **Miscellaneous.**

Fruits, nuts, vegetables, meat, fish and game dressing, 52595.

COOKING, BAKING AND ETC.—contd.

Graters, crumblers, scrapers (including apparatus for mincing and cutting slices). 46546.

meat safe, *see* **Miscellaneous.**

Miscellaneous—

Apparatus for preparing liquid food. 48786.

Dough shaping and working machines. 47858.

Meat safe. 52572.

Oven accessories and other baking apparatus. 47505.

Roasting jacks, and spit grilling and toasting apparatus. No case.

shrimp de-veining machine, *see* **Fruits etc.**

Steam, hot water and like cooking apparatus.

46569, 48437, 49724, 51125, 52715.

Tiffin and like carriers. 49573, 53308.

Cooking stoves, *see* **STOVES, ETC.**

Cooking vessels, *see* **HOLLOW-WARE.**

Cooling air by heat exchange, *see* **HEATING SYSTEMS.**

COOLING AND ICE-MAKING. VII(1).

(This heading includes only general methods and apparatus for the production of cold and for cooling gases and liquids. Except in the case of items mentioned under subheading "Miscellaneous", cooling processes and apparatus applicable for particular purposes are indexed under the headings for such purposes. Thus methods of cooling Dynamoelectric machinery will be indexed under DYNAMO-ELECTRIC, ETC.).

Cold and heat retaining vessels (containers of small capacity without cooling or heating means suitable for transporting or storing).

49452, 51374.

Cooling gases and liquids, (excepting heat interchanging apparatus and ice-making).

47067, 48217, 48381, 50042, 50356, 50770, 52949, 53158, 53174, 53274.

heating exchange apparatus, *see* **HEATING SYSTEMS, ETC.**

ice-candy, making, *see* **Ice making, etc.**

COOLING AND ICE-MAKING. VII(1).

—contd.

Ice-making and congelation of liquids (excepting processes and apparatus for the production of cold in general to be used subsequently for ice-making).

47238, 47459, 47598, 48619, 50552, 51733.

liquids cooling, *see* Cooling, gases.

Miscellaneous—

Cooling unit containing fluid in a sealed container. 53174.

Refrigerating systems for the production of cold—

Absorption systems. 47302, 48491, 52405, 53378.

Compression systems.

46706, 47004, 47145, 47146, 47683, 47908, 48272, 48491, 49210, 50331, 52405, 52764, 53089, 53090, 53091, 53163, 53205.

Systems other than absorption and compression. 53128.

refrigerator cars, railway, general construction of, *see* RAILWAY, ETC., VEHICLES, ETC.

Refrigerators, cooling chambers and cold storage rooms other than systems for production of cold.

48619, 50356, 51058.

refrigerators operating on the reversed hot-gas engines cycle, *see* Refrigerating, etc. (Compression, etc.).

sealing off exhaust tubes of glass vacuum vessels, *see* GLASS, ETC.

Cooling devices for Cinematographic projectors, *see* CINEMATOGRAPHY.

Cooling internal combustion engines, *see* INTERNAL, ETC.

Cooling systems for dynamo electric machines, *see* DYNAMO, ETC.

Cop changing mechanisms, *see* LOOMS.

Cop winding machines, *see* SPINNING, ETC.

Copal, *see* WAXES, ETC.

Copolymers and compositions for preparing copolymers, *see* CARBON COMPS., ETC.

Copper chlorides, *see* CHEMICAL COMPS., ETC.

Copper depositing on articles by electrolysis, *see* ELECTROLYSIS, ETC.

Copying or tracing appliances, *see* PRINTING.

Cone winding machines, *see* SPINNING, ETC.

Cores for casting metals, *see* CASTING METALS.

Cores for inductances coils, *see* CAPACITANCES, ETC.

Cores for loading coils, *see* CAPACITANCES, ETC.

Cores for magnets, *see* DYNAMO-ELECTRIC, ETC.

Cores for moulding plastic materials, *see* MOULDING, ETC.

Cores for transformers, electric, *see* ELECTRIC CURRENTS, ETC.

Cork-screw, *see* STOPPERING, ETC.

Corn silos, *see* BUILDINGS, ETC.

Corns grinding mill, *see* GRINDING, ETC.

Corns, shelling, *see* GRAINS, ETC.

Corrosion of metallic surfaces preventing, *see* INCUSTATION, ETC.

Cosmetics, *see* TOILET, ETC.

Cots, aprons and the like for drafting fibres, *see* SPINNING, ETC.

Cotters and cotter pins, *see* NAILS, ETC.

Cotton fabrics and fibres bleaching, *see* DYEING, ETC.

Cotton gins, *see* SPINNING, ETC.

Coumarin derivatives, *see* CARBON COMPS., ETC.

Counter for the passage of vehicles, *see* CALCULATING, ETC.

Counting apparatus, *see* CALCULATING, ETC.

Counting circuits, *see* CALCULATING, ETC.

Counting stand for teaching arithmetic, *see* BOOKS, ETC.

Couplers, railway, *see* RAILWAY, ETC., VEHICLES, ETC.

Couplings for conveying rotary motion, *see* MECHANISM, MISC.

Couplings for pipes, *see* PIPE-JOINTS, ETC.

Couplings for shafts, *see* MECHANISM, MISC.

Couplings, pipe, *see* PIPE-JOINTS, ETC.

Couplings, railway, *see* RAILWAY, ETC., VEHICLES, ETC.

Couplings, for cables and the like, *see* ELECTRIC COUPLING, ETC.

Couplings for ropes and cords, *see* ROPES, ETC.

Couplings, shafts and the like, *see* MECHANISM MISC.

Cowpers, *see* FURNACES, ETC.

Cracking hydrocarbons, *see* DISTILLING, ETC.

Cracking nuts, *see* GRAIN, ETC.

Cracking hydrocarbons, *see* DISTILLING, ETC.

Cracks, detecting in metallic parts otherwise than by electric disk, *see* GAUGES, ETC.

Cramps and clamps, joiners' and other workmen's, *see* HAND TOOLS.

Cranes and winches, *see* LIFTING, ETC.

Crates or cases, *see* BOXES, ETC.

Creasing paper and paperboards, *see* PAPER.

Creels for spinning, *see* SPINNING, ETC.

Crepe rubber, *see* INDIA RUBBER, ETC.

Crimping and curling of artificial fibres and yarns, *see* CELLULOSE, ETC.

Crimping synthetic fibres and filament, *see* SPINNING, ETC.

Crimping yarns and threads, *see* SPINNING, ETC.

Crossbar selector switches, telephone, *see* TELEPHONES, ETC.

Crushing and pulverising, *see* GRINDING, ETC.

Crystal amplifiers, *see* WIRELESS, ETC.

Crystal contacts, *see* WIRELESS, ETC.

Crystal detectors, *see* WIRELESS, ETC.

Crystal diode or transistors for wireless signalling, *see* WIRELESS, ETC.

Crystal diodes or detectors for wireless signalling, *see* WIRELESS, ETC.

Crystal rectifiers, low frequency electric current, *see* ELECTRIC CURRENTS, ETC.

Crystal triodes, *see* WIRELESS, ETC.

Crystallising, *see* DISTILLING, ETC.

Cultivating implements, *see* AGRICULTURAL, ETC.

Culture media, *see* DISINFECTING, ETC.

Culturing micro-organisms, *see* DISINFECTING, ETC.

Culvert pipes, *see* DRAINS, ETC.

Cupboards, *see* FURNITURE.

Cupola furnaces, *see* FURNACES, ETC.

Cuprous chloride, *see* CHEMICAL COMPOUNDS, ETC.

Cuprous hydroxide, *see* CHEMICAL COMPOUNDS, ETC.

Curing tobacco, *see* CIGARS, ETC.

Current meters, electric, stream velocity measuring, *see* MEASURING, ETC.

Current meters, fluid flow velocity measuring, *see* MEASURING, ETC.

Curtains, *see* FURNITURE.

Cushions for furniture, *see* FURNITURE.

Cushioning devices, *see* SPRINGS, ETC.

CUTLERY. LXVI(2).

Forks. No case.

Knives. 47705.

magazine for safety razor blades, *see* Razor, etc.

Miscellaneous—

Cutting device for removing stitches. 49848.

Razors and shavers.

46467, 46955, 47286, 50850.

safety razor blades disappears, *see* Razors, etc.

Scissors and hand shears. 46843.

Cutting device for removing stitches, *see* CUTLERY.

Cutting metals, *see* METAL WORKING.

Cutting oil, *see* OILS, ETC.

Cutting plastic bodies cast in moulds, *see* MOULDING, ETC.

CUTTING, PUNCHING AND PERFORATING PAPER, FABRICS AND LIKE. XXIV(1).

cheque-perforating apparatus, *see* Punching, etc.

cinematographic films, perforating, *see* Punching, etc.

circular knives for trimming rubber and the like, *see* Cutting, etc.

Cutting and severing machines, 47351, 47372, 47465, 47495, 49989, 51964, 53362.

CUTTING, ETC.—*contd.*

perforating paper and the like, apparatus for, *see* Punching, etc.

Punching and perforating machines.
47495, 47704, 48073, 49964, 51353,
52093, 53327.

Cutting tea, *see* TEA, ETC.

Cutting tools, metal, *see* METAL WORKING.

Cutting wood, *see* WOOD, ETC.

Cyanamides, *see* CARBON, ETC.

CYCLES AND LIKE VEHICLES. LII(5).

Accessories for (awnings, windshields, stands and luggage carriers and like attachments).

48829, 49136, 52564, 53190.

Brake operating mechanism. 50906.

cycle pumps, reciprocating piston, construction of, *see* AIR AND GASES, ETC.

driving, system auxiliary motor, *see* MOTOR VEHICLES.

Driving mechanism (including human power driving mechanism for apparatus other than vehicles).

46974, 48601, 49684, 51361, 52238,
53062.

gear mechanisms for driving, arrangement and disposition of, *see* Driving, etc.

holders for wheels when not in use, *see* Accessories, etc.

internal combustion engines, mounting and arranging in pedal cycles, *see* MOTOR VEHICLES.

motor driven pedal cycles, arrangement and disposition of motors in, *see* MOTOR VEHICLES.

mountings for generators in cycles, *see* Accessories, etc.

mud, dress and like guards, for wheels, *see* Accessories, etc.

pedals, *see* Driving, etc.

pumps, means for mounting on cycles, *see* Accessories, etc.

saddle pumps for cycles, *see* Accessories, etc.

saddle pumps, mounting and arranging in cycles, *see* Accessories, etc.

saddle pumps, reciprocating piston type, construction of, *see* AIR AND GASES, ETC.

CYCLES AND LIKE VEHICLES.—*contd.*

saddles for cycles, *see* Accessories, etc.
sheaths for handle bars, *see* Accessories, etc.

Steering mechanism. 51346, 51862.

Structural design of (other than brakes steering and driving mechanism).
46952, 48651, 49584, 50419.

telescopic forks for motor cycles, *see* Steering, etc.

wheels for cycles, *see* WHEELS, ETC.

Cycles, mounting electric generators on, *see* CYCLES, ETC.

Cyclo-alkanes, *see* CARBON COMPOUNDS, ETC.

Cyclohexane and hexanes, *see* CARBON, ETC.

Cyclohexanols, *see* CARBON, ETC.

Cyclone separators, *see* CENTRIFUGAL MACHINES, ETC.

Cyclopentano-polyhydro phenanthrine derivatives, *see* CARBON COMPOUNDS, ETC.

Cylinder heads for internal combustion engines, *see* INTERNAL COMBUSTION, ETC.

Cymene, *see* CARBON COMPOUNDS, ETC.

D.

Damming walls, *see* HYDRAULIC ENGINEERING, ETC.

Damping device for pickerstick, *see* LOOMS.

Damping tobacco, *see* CIGARS, ETC.

Dams, *see* HYDRAULIC ENGINEERING, ETC.

Dash pots and cataracts, construction of, *see* SPRINGS, ETC.

Decanting and settling, purifying liquids, by, *see* FILTERING, ETC.

Decatising wool by wet methods, *see* DYEING, ETC.

DECOCTIONS, EXTRACTS, AND INFUSIONS. MAKING. XIV(3).

48224, 50567.

Decolourising and purifying water, *see* WATER, ETC. PURIFYING, ETC.

Decolourising and purifying liquids containing colloids, *see* CHEMICAL PROCESSES, ETC.

- Decolourising and purifying oils, *see* OILS, ETC.
- Decolourising and purifying organic compounds other than sugar and oils, *see* CARBON COMPOUND, ETC.
- Decolourising and purifying sugar, *see* SUGAR.
- Decorticating fibrous materials, *see* SPINNING, ETC.
- Defibering husks mechanically, *see* SPINNING, ETC.
- Deflectors, snow and insect for motor and other vehicles, *see* ROAD VEHICLES.
- Defoliation of plants compositions for, *see* AGRICULTURAL, ETC.
- Degasifying coal and like solid fuel, *see* COKING, ETC.
- Dehairing hides and skins, *see* LEATHER.
- Dehydration of castor oil, *see* FATS, ETC.
- Deicers, electrically heated, *see* HEATING BY ELECTRICITY.
- Deicers for aircraft, arrangement and mounting of, *see* AERONAUTICS.
- Delivering numerical quantities of articles, machine for, *see* CALCULATING, ETC.
- Delivering solids by weight, *see* WEIGHING, ETC.
- Dental creams, *see* TOILET, ETC.
- Dentifrices, *see* TOILET, ETC.
- Deodorants, *see* DISINFECTING, ETC.
- Deodorizing bitters by filtration, *see* FILTERING.
- Deoxidation and desulphurisation of steel, *see* IRON & STEEL, ETC.
- Desulphurising of coals, *see* COKING, ETC.
- Desulphurising mineral oils, *see* OILS, ETC.
- Detergents, *see* SOAPS, ETC.
- Detonators for blasting and mining, *see* AMMUNITION, ETC.
- Devnagari script typewriters, *see* TYPE WRITERS.
- Dextran, *see* CARBON COMPOUNDS, ETC.
- Dextran preparations, *see* DISINFECTING, ETC.
- Diamines, *see* CARBON COMPOUNDS, ETC.
- Diaphragm pumps for liquids, *see* PUMPS, ETC.
- Diaphragm valve for controlling fluid flow, *see* VALVES, ETC.
- Diaphragms, electrolytic cells, *see* ELECTROLYSIS, ETC.
- Diarycum-wallet, *see* BAGS, ETC.
- Diarylmethane, *see* CARBON COMPOUNDS, ETC.
- Diazomino compounds, *see* CARBON COMPOUNDS, ETC.
- Dibenzylethylene diamine penicillin, *see* CARBON COMPOUNDS, ETC.
- Dicarnitine dichloride, *see* CARBON COMPOUNDS, ETC.
- Dichloroacitamidopropanediols, *see* CARBON COMPOUNDS, ETC.
- Dictating machines, *see* PHONOGRAPHS, ETC.
- Die-casting machines, *see* 'CASTING METALS' ETC.
- Di-electric heating device, *see* HEATING BY ELECTRICITY, ETC.
- Dielectric of condensers impregnating compound for, *see* CONDUCTORS, ETC.
- Dielectric of electric cables impregnating compound for, *see* CONDUCTORS, ETC.
- Diels-Alder condensation products, *see* CARBON COMPOUNDS, ETC.
- Diesel engines, *see* INTERNAL COMBUSTION, ETC.
- Diffusers for aerating liquid, *see* AERATING, ETC.
- Diffusers for chemical processes, *see* CHEMICAL PROCESSES, ETC.
- Diffusers for fermentation processes, *see* BEVERAGES, ETC.
- Diffusers for floatation processes, *see* WASHING GRANULAR, ETC.
- Diffusers for sewage treatment, *see* SEWAGES, ETC.
- Digesters (closed heaters in which substances are integrated with liquids), *see* HEATING SYSTEMS, ETC.
- Digging picking, channelling and slitting apparatus other than agricultural implements, *see* EXCAVATING, ETC.
- Dihydrazino compounds, *see* CARBON COMPOUNDS, ETC.
- Dihydropyridazine, *see* CARBON COMPOUNDS, ETC.

Dikes or jetties, *see* HYDRAULIC ENGINEERING.

Dioxopyrrolidines, *see* CARBON COMPOUNDS, ETC.

Diphenyl sulphides, *see* CARBON COMPOUNDS, ETC.

Dipilating compositions for dehairing skin, *see* LEATHER.

Direction finders, wireless, *see* WIRELESS, ETC.

Disc brakes, *see* BRAKES, ETC.

Disc harrows, *see* AGRICULTURAL, ETC.

Disc plough, *see* AGRICULTURAL, ETC.

Discharge devices, electric, *see* VACCUM, ETC.

Discharge lamps electric, *see* VACUUM, ETC.

Discharge lamps, electric circuits for operating, *see* ELECTRIC SUPPLY, ETC.

Discharge lamps, luminescent material for, *see* LUMINESCENT, ETC.

Discharge regulator for hydraulic plants, *see* HYDRAULIC ENGINEERING, ETC.

Discharge tubes, electric, *see* VACUUM, ETC.

DISINFECTING AND DEODORIZING, INCLUDING MEDICAL AND LIKE PREPARATIONS. XIX(1).

(This heading does not include washing bottles, sewage treatment and water purifying which are indexed in separate headings.)

ampoules, *see* Miscellaneous.

anaesthetic compositions, *see* Medicines, etc. (Internal, etc.)

anaesthetics of definite chemical structure, *see* CARBON COMPOUNDS, ETC.

antiseptics, *see* Deodorants, etc.

barbituric acid composition, *see* Medicines, etc. (Internal, etc.)

blood and plasma, treating with radiations, *see* CHEMICAL PROCESSES, ETC.

capsules, making by moulding, *see* MOULDING, ETC.

carbomycin, *see* Medicines, etc.

cultivating media bacteria and fungi, *see* Miscellaneous.

DISINFECTING, ETC.—contd.

culture media bacteria and fungi, *see* Miscellaneous.

culturing micro-organisms, *see* Miscellaneous.

Deodorants, fumigants, disinfectants and antiseptics.

47460, 47745, 49806, 49945, 50108, 50175, 52034, 52666, 52761.

Disinfecting—

Air and gases, disinfecting. 50348.

Chambers and ovens for disinfecting by means of gases and vapours.

No case.

Miscellaneous. No case.

diuretic compositions, *see* Medicines. (Internal, etc.)

erythromycin antibiotic, *see* Medicines, etc. (Internal, etc.)

extracts, decoctions and infusions making, *see* DECOCTIONS, ETC.

Fumagating and vaporising for sanitary and like purposes.

46583, 47572, 48045, 48189, 49258, 50056.

fumigants, *see* Deodorants, etc.

fungicides, *see* Insecticides, etc.

germicidal soap, *see* Insecticides, etc. (Other than, etc.)

herbicidal composition, *see* Insecticides, etc. (Other than, etc.)

insecticide spraying equipments, *see* SPRAY, ETC.

Insecticides and vermin destroying compositions—

Containing plant extracts.

49426, 52338, 52374.

Other than containing plant extracts.

46543, 46614, 46851, 46915, 46997, 47032, 47229, 47270, 47424, 47523, 47606, 47654, 47745, 47856, 48189, 48265, 48309, 48566, 48567, 48743, 48744, 48790, 48809, 48821, 49106, 49125, 49529, 49550, 49691, 49737, 49759, 49763, 49764, 49889, 50071, 50087, 50175, 50327, 50344, 50486, 50490, 50548, 50747, 50922, 50962, 51153, 51251, 51263, 51331, 51412, 51699, 51729, 51903, 52052, 52053, 52088, 52221, 52259, 52284, 52304, 52373, 52431, 52518, 52578, 52579, 52583, 52603, 52605, 52686, 52780, 52802, 52865, 52951, 53030, 53096, 53275, 53358.

DISINFECTING, ETC.—*contd.*

insulin preparations, *see* Medicines, etc.
(Hormones, etc.)

Medicines and other pharmaceutical preparations (excepting drugs of distinct chemical composition).—

Anti-toxins, toxins, vaccines and immunising and like serums.

46533, 47728, 47818, 48508, 49141, 52212, 52680, 53173.

External remedies (other than anti-toxins, toxins, vaccines and serums)

46543, 46579, 46580, 46849, 46851, 46903, 46953, 47621, 47639, 47684, 48155, 48295, 48314, 48503, 48789, 49070, 49129, 49205, 49511, 49567, 49570, 49697, 49881, 50026, 50049, 50089, 50154, 50219, 50328, 50437, 50489, 50502, 50602, 50620, 50672, 50713, 50910, 51153, 51167, 51168, 51227, 51293, 51326, 51488, 51558, 51692, 51806, 51834, 51864, 51866, 51966, 51980, 51981, 52044, 52156, 52324, 52334, 52357, 52374, 52520, 52617, 52624, 52666, 52701, 52744, 52761, 52778, 52918, 52944, 52990, 53067, 53072, 53100, 53108, 53157, 53211, 53241, 53294, 53397.

Hormones and animal gland extracts.

46851, 47047, 47048, 47366, 47472, 47980, 48827, 48984, 49308, 50219, 51036, 52436, 52649.

Internal remedies (other than hormones, animal gland extracts).

46543, 46579, 46580, 46849, 46903, 46953, 47233, 47253, 47621, 47639, 47684, 47940, 48239, 48295, 48314, 48503, 48789, 48837, 48871, 48967, 49070, 49129, 49133, 49185, 49205, 49297, 49300, 49308, 49451, 49470, 49567, 49570, 49612, 49652, 49697, 50026, 50031, 50049, 50089, 50101, 50154, 50169, 50215, 50251, 50328, 50375, 50437, 50449, 50489, 50502, 50522, 50602, 50620, 50672, 50692, 50713, 50808, 50877, 50910, 51153, 51167, 51168, 51199, 51227, 51258, 51293, 51300, 51304, 51326, 51488, 51503, 51508, 51547, 51558, 51692, 51748, 51806, 51811, 51819, 51834, 51864, 51866, 51966, 51980, 51921, 52022, 52044, 52129, 52156, 52234, 52297, 52324, 52334, 52341, 52342, 52357, 52374, 52520, 52624, 52701, 52744, 52761, 52778, 52792, 52793, 52861, 52820, 52871, 52891, 52918, 52944, 52971, 52990, 53067, 53100.

DISINFECTING, ETC.—*concl'd.*

Medicines and other, etc.—*cont'd.*

Internal remedies, etc.—*cont'd.*

53108, 53120, 53124, 53157, 53211, 53218, 53241, 53294, 53384, 53397, 53439, 53457, 53458.

micro-organism cultures, *see* Miscellaneous, etc.

Miscellaneous—

Ampoules and the like containers.
51275, 51652.

Capsules. 49604, 51682.

Cooling pharmaceutical pellets.
49300.

Culture media. 50048, 50320, 52744.

Culturing micro-organisms. 51659.

Dispensing containers. 48483.

Micro-organism cultures. 49094.

Preparing pharmaceutical tablets.
50436.

Preserving cells of organs. 48268.

Radiopaque composition. 50860.

Tablet container, medicinal. 46384.

X-ray diagnostic agents. 48831.

mouth washes, *see* Medicines, etc.

penicillin preparations *see* Medicines, etc.

pest control compound vapour generator, *see* Fumigating, etc.

preserving cells of organs, *see* Miscellaneous.

radiopaque composition, *see* Miscellaneous.

rodenticide compositions, *see* Insecticides, etc. (Other than, etc.)

tablets, pharmaceutical, preparation of, *see* Miscellaneous.

therapeutic compositions, *see* Medicines, etc.

thiobarbituric acid compositions *see* Medicines, etc. (Internal, etc.)

vaccines, *see* Medicines, etc. (Anti-toxins, etc.)

vitamins, *see* CARBON COMPOUNDS, ETC.

weed destroying compositions, *see* Insecticides, etc. (Other than etc.)

x-ray diagnostic agent, *see* Miscellaneous.

Disintegrating or grinding materials, *see* GRINDING, ETC.

Disintegrating or grinding mills, see GRINDING, ETC.

Dispenser cathodes, see VACUUM, ETC.

Dispenser cathodes, for electric discharge devices, see VACUUM, ETC.

Dispensing apparatus by coinfreed mechanism, see COINFREED, ETC.

Dispensing means or stoppers for containers, see STOPPERING, ETC.

Dispensing pigment in plastics by milling, see GRINDING, ETC.

Displaying printed or photographic matters apparatus for, see ADVERTISING, ETC.

DISTILLING AND EVAPORATING LIQUIDS. V.

(This heading does not include liquefying and evaporating air and gases see AIR AND GASES; DRYING SYSTEMS; GAS MANUFACTURE; carburetting see INTERNAL COMBUSTION ENGINES; distilling metals see METALS, EXTRACTING, and refrigerating systems see COOLING.)

column stills see Condensers.

concentrating liquids by evaporation, see Evaporators, etc.

Condensers, condenser systems, column stills and rectifiers, construction of (plants and processes, other than for cracking and distilling hydrocarbons). 47262, 47589, 48112, 49165, 50521.

Cracking hydrocarbons.

47218, 47469, 47861, 47931, 48142, 48351, 48778, 48779, 48948, 49505, 49563, 49636, 49710, 49922, 50380, 50546, 51283, 51775, 51968, 53201, 53223, 53315, 53385.

Crystallising other than by evaporating.

48149, 49572, 49882, 50271, 51710, 51875, 51938, 53064.

distilling or coking solid carbonaceous materials, see COKING, ETC.

Evaporators and evaporating systems (plants and processes, other than for cracking and distilling hydrocarbons).

47454, 48177, 48753, 48887, 48955, 49036, 49150, 49396, 49610, 49768, 51170, 52866, 52867, 53149.

hydrocarbons cracking, see Cracking, etc.

DISTILLING, AND, ETC.—contd.

Hydrocarbons, distilling without chacking (including pitch, resin oils and turpentine).

No case.

Hydrogenation, destructive, of coal, oils and like carbonaceous, materials, obtaining liquids by. 47661, 48103, 48679, 49217, 49658, 49678, 51563, 53233, 53385.

Plants and processes not otherwise provided for.

47262, 47572, 47727, 48016, 49749, 49774, 50122, 50276, 50631, 50909, 51775, 52480, 53011, 53334.

scale formation in evaporators, removing and preventing see INCRUSTATION, ETC.

separating compounds by azeotropic, distillation, see Plants, etc.

solar heat, systems for utilising, see HEATING SYSTEMS, ETC.

solvent recovery apparatus, see Plants, etc.

Distilling or coking coal, see COKING, ETC.

Ditches, excavating or ditching machines for, see EXCAVATING.

Diuretic composition, see DISINFECTING, ETC.

Dobbies, see LOOMS.

Dome, bowl like refractor for lamps, see LAMP-CHIMNEYS, ETC.

DOOR AND GATE OPERATING APPLIANCES, HINGES AND PIVOTS. LXIV(3).

(This heading includes means for opening, closing and controlling the operation of doors, gates, barriers of buildings, ships, vehicles and road and railway tracks.)

door checking and holding device for motor vehicle doors, see Means for, etc.

door handle and latch mechanism for motor vehicles, see Means, etc.

Door, window and like hinged articles holders, stops and stays for (means for holding in open position independently of opening and closing means. 50535.

Hinges and pivots.

46602, 48015, 48980, 49194, 52911.

DOOR AND GATE, ETC.—contd.

Holders for sliding doors, windows and like (means apart from operating means).

46514.

latch mechanisms for motor vehicle door, see FASTENINGS, ETC.

Means for opening, closing and controlling operation of door, gate, and barriers of buildings and vehicles.

48283, 49933, 49938, 49977, 50600, 50655, 50665, 51585, 52974, 52996, 53302.

motorcar windows means for operating members, see Means for, etc. (Opening, etc.)

window opening and closing apparatus, see Means, etc.

Door switches, snap action type, see ELECTRIC SWITCHES, ETC.

DOORS AND WINDOWS AND THEIR ACCESSORIES. XXVI(3).

(This heading includes doors and windows for buildings, vehicles and like structures only. For coke-oven doors, see COKINGS, ETC. for Furnaces Doors, see FURNACES, ETC.)

Accessories—

Draught and dust excluders.

49382, 49388, 49398, 50347.

Window and like guards. No case.

window opening and closing apparatus, see DOOR AND GATE, ETC.

blinkers and movable closures for opening, see Windows, etc.

Door and door frames.

52089, 53935, 53966.

louvres, see Windows, etc.

shades and blinds for windows, see FURNITURE.

venetian blinds, see Window, etc.

weather excluders for motor vehicle doors and windows, see Accessories, etc. (Draught, etc.)

Window shutters.

48161, 48297, 50317, 51342, 52532, 53966.

Windows, fan lights and roof lights (including miscellaneous, transparent sheet materials but not window shutters).

47426, 48748, 48991, 49538, 50194, 53078.

Dough working apparatus, see COOKING, ETC.

Doughs testing apparatus, see GRAINS, ETC.

Dowel guns, see SMALL ARMS, ETC.

Draft gears, railway, see RAILWAY, ETC. VEHICLES, ETC.

Drafting fibres, see SPINNING, ETC.

Drafting mechanism for ring spinning machines, see SPINNING, ETC.

DRAINS AND SEWERS. II(2).

Conduits, culverts and sewers.

47868, 52629.

Drainages and sewerage. No case.

Draught promoting appliances for furnaces, see FURNACES, ETC.

Draw bar attachments for vehicles other than railway and tramway vehicles, see ROAD VEHICLES.

Draw-benches, see METAL WORKING.

Drawing dies, see METAL WORKING.

Drawing fibres, see SPINNING, ETC.

Drawing frames for textile rovings, see SPINNING, ETC.

Drawing mechanism for fibre spinning and preparing machine, see SPINNING, ETC.

Drawing metal, see METAL WORKING.

DRESS AND DRESS FASTENINGS. LXVI(3).

Belts, equipment and other straps for personal wear, braces and suspenders. 52060, 52900.

brassiere, see Wearing, etc.

buckles, see Fastenings, etc.

bust supporters, see Wearing, etc.

buttons and button-fasteners, see Fastenings, etc.

collar presses, see Wearing, etc.

Fastenings, dress (other than belts, braces and suspenders).

49271, 49368, 49369, 50322, 50326, 50807.

garment presses, see Trousers, etc.

gloves and like hand coverings, see Miscellaneous.

Hats and head coverings. 47780, 48654, 49460, 53378.

headbands for helmets, see Hats, etc.

DRESS AND DRESS FASTENINGS—*contd.*

improvements in waist bands trouser,
see Belts, etc.

Miscellaneous—

Mudguards or shields for dress. 49012

neck-ties and bows, see Wearing, etc.

pleating, corrugating wearing apparel,
see Miscellaneous.

shrouds, see Miscellaneous.

sleevelinks, see Fastenings, etc.

studs, see Fastenings, etc.

Trouser and garment protectors, presses
and like.

49864, 51423, 52900.

Wearing apparel including tailoring
and dress making.

46917, 48165, 48559, 49177, 49439,
49523, 50811, 51037, 51703, 53378.

Dressings, surgical, see MEDICAL, ETC.

Drill bits for boring earth and rock, see
MINING, ETC.

Drilling metals, see METAL WORKING.

Drilling or boring earth and rock, see
MINING, ETC.

Drills, wood and metal, see METALS
WORKING.

Drills, rock and earth, see MINING, ETC.

Drop-box motion for looms, see LOOMS.

Drop-head for motor cars, see ROAD
VEHICLES.

Dropping devices for bottles, see STOP-
PERING, ETC.

Drums, casks and barrels, see HOLLOW
WARE.

Dry cells, electric, see BATTERIES, ETC.

**DRYING SYSTEMS AND APPARATUS
(EXCEPTING CENTRIFUGAL MA-
CHINES; DISTILLING, ETC; STEAM
SUPERHEATERS; HEATING SYS-
TEMS). VIII.**

*(Removing water from liquid-chemicals
by treatment with chemical elements
and compounds is indexed under only
the headings for chemicals treated.)*

Air and gases used for drying, regulat-
ing flow and condition of. 46474,
46775, 47316, 49086, 52078, 52120.

DRYING SYSTEMS, ETC.—*contd.*

Apparatus in which articles and materi-
als are dried at rest or locally agitated.
46861, 49017, 52467.

Charging, feeding and discharging
devices.
53245.

clothes drying by squeezing, see DYE-
ING, ETC.

Desiccants and absorbents. No case.

Drying air and gases. 47421, 48000,
49069.

drying tea on endless belt, see Endless
belt, etc.

Endless band, moving tray and like
travelling apparatus. 46775, 46776,
46942, 47014, 47290, 49080, 49086,
51747, 52078, 53127.

Heating apparatus, arrangement of.
No case.

Miscellaneous—

Drying plastic materials. 47014.

rollers or cylinders, hollow general
construction of, see FABRICS
FINISHING, ETC.

Rotating, shaking, oscillating and other-
wise moving containers or drums.
47688, 51464, 53127.

squeeze driers for clothes, see DYEING,
ETC.

Supports for articles and materials
(excepting endless bands), construc-
tion of. No case.

Systems in which materials are dried
by progressive movement other than
endless band and rotating contain-
ers.
47389, 47793, 51442, 52379, 53245.

Dumping or tipping apparatus, see LIFT-
ING, ETC.

Dumping wagons and the like, see ROAD
VEHICLES, ETC.

Duplicating ink, see WRITING, ETC.

Duplicating machines, see PRINTING.

Duplicators, see PRINTING.

Dust bins, see CLOSETS, ETC.

Dust, separating from air and gases, other
than by washing, see AIR, ETC.

Dyeings producing on anodically oxidized
aluminium, see TINNING.

DYEING, BLEACHING, WASHING AND LIKE TREATMENT OF TEXTILES AND TEXTILE MATERIALS WITH LIQUIDS AND GASES. XXII(1).

(Apparatus for applying liquids by single passage for materials under a single roller or for applying size and other viscous liquids are indexed under PROOFING.)

Bleaching and washing textiles, process and materials for (other than washing laundry and domestic)—

Other than by the use of oxidising and reducing agents.

48741, 49644, 50988, 52731, 53084.

Oxidising agents, by the use of.

48190, 48620, 48723, 49671, 49676, 50374, 50967, 50988, 51675, 52178, 52540, 53084, 53134, 53135.

Reducing agents, by the use of.

50988, 53084, 53284.

cellulose fibres, treating with brightening agents, *see* Treating, etc.

cellulose goods, treating with peroxides, *see* Bleaching, etc. (Oxidizing, etc.)

clothes washing machine, *see* Washing, etc.

colloidal dispersions depositing on fibres, *see* Treating, etc.

colours, developing on textiles, *see* Processes, etc. (Dyes forming)

conditioning yarn apparatus for, *see* Dyeing, bleaching, etc.

decolouring wool, *see* Treating, etc.

degumming fibrous plant materials, *see* Treating, etc.

dyeings and prints, treating with liquids for improving fastness of, *see* Treating, etc.

Dyeing, bleaching and washing otherwise treating textiles with liquids, and gases, apparatus for (other than for washing domestic and laundry).

46836, 48723, 48741, 48941, 49116, 49600, 50827, 51295, 51660, 52350, 52731, 52923, 53113.

dyeing with nitro dyes, *see* Processes, etc. (Dyeing by, etc.)

dyes stripping or lightening, *see* Bleaching, (other than, etc.)

fibres treating with peroxides, *see* Bleaching, etc. (Oxidising, etc.)

Irons for pressing clothes, *see* Washing, etc.

DYEING, BLEACHING, WASHING AND LIKE, ETC.—contd.

padding machines, *see* Dyeing, etc.

pre-scouring textile fibres, *see* Treating textiles, etc.

Processes and materials for dyeing textiles and other fibrous materials—

Dyeing by processes other than forming on the material, mordant and vat dyeing.

46504, 46866, 47327, 47647, 47760, 47785, 48631, 48723, 49542, 49630, 49756, 50413, 50491, 51660, 52417, 52452, 52509, 52656, 52983, 53140, 53186, 53206.

Dyes, forming and developing on the material (other than stable preparations and diazo compounds).

47015, 47016, 48184, 48625, 48676, 49029, 49542, 50205, 51180, 51599, 51601, 51632, 51636, 51790, 51914, 52049, 52051, 52361, 52446, 53055, 53212, 53234, 53425.

Mordant dyes, dyeing with.

49542, 50491.

Vat and sulphureted dyes, dyeing with.

47350, 48183, 48184, 48193, 48194, 48195, 48701, 48702, 48703, 49796, 49108, 49542, 49630, 50160, 50491, 52291, 53206, 53383, 53425.

stabilising textile materials by liquid treatment, *see* Treating, etc.

starch removing from fibres, *see* Bleaching, etc. (Oxidising, etc.)

sulphur dye composition *see* Processes, etc. (Vat, etc.)

textiles heating with liquids to render water repellent, *see* Treating, etc.

treating fibres to improve their dyeability, *see* Processes, etc. (Dyeing etc.)

Treating textiles with liquids and gases, other than for bleaching, dyeing and washing proofing.

46486, 46660, 46756, 46802, 47174, 47239, 47431, 47508, 47536, 47558, 47660, 47695, 47845, 47860, 48250, 48279, 48723, 48731, 48745, 48746, 48972, 49169, 49233, 49292, 49455, 49542, 49589, 50045, 50350, 50374, 50399, 50506, 50622, 50771, 50827, 50988, 51000, 51110, 51187, 51328, 51660, 52344, 52416, 52466, 52460, 52994, 53022, 53084, 53140, 53145, 53220, 53284.

DYEING, BLEACHING, ETC.—concl'd.

Washing, mangling, ironing and starching clothes, domestic and laundry.

46950, 47664, 48842, 49864, 49886,
49887, 49950, 49965, 50209, 50725,
50726, 51029, 51085, 51423, 51572,
51943, 53145.

yarns, treating with aqueous alcohol,
see Treating, etc.

DYNAMO-ELECTRIC MOTORS AND GENERATORS. LVH(1).

Alternating current machines, general design of—

Commutator machines. 48316.

Induction machines. 47081, 48445,
51344, 51385, 52138, 52527, 52564.

Machines other than commutator and induction.

46468, 47935, 48382.

Armatures, cores, laminations and windings, details of.

46470, 47517, 47947, 48316, 48859,
49275, 49418, 49643, 49831, 50441,
50585, 50857, 52345.

Brushes, commutators and collectors, details of.

46749.

Casings, frames, and supports, details of.

52585.

commutating, see Brushes, etc.

Cooling and ventilating systems for dynamoelectric machines. 50585, 50867, 50895, 52261, 52327, 53184.

Direct current machines, general design of.

52711.

Driving, arrangements of.

48389, 48930, 50500, 50501.

electric generators induction type, see Alternating, etc. (Induction, etc.)

electromagnetic vibrators, see Miscellaneous.

Electromagnets and magnets permanent, construction of.

46468, 47517, 47750, 48070, 48382,
48541, 48792, 48859, 49386, 49900,
50373, 50574, 50742, 51034, 51129,
51239, 51286, 52258, 52616, 52650,
52740, 53203.

ferromagnetic materials for magnets, see Electromagnets, etc.

Heat exchanger for electric dynamos, see HEATING SYSTEMS.

DYNAMO-ELECTRIC, ETC.—cont'd.

induction motors, see Alternating, etc. (Induction, etc.)

magnet rotors, see Electromagnets, etc.

magnet systems for rotors, see Electromagnets, etc.

magnetic cores, see Electromagnets, etc.

magnetic fields alternately intensifying and nullifying, device for, see Electromagnets etc.

magnetic motors, see Miscellaneous.

magnetic sheet materials, producing by electrolysis, see ELECTROLYSIS, ETC.

Miscellaneous—

Electromagnetic devices for causing reciprocating movement. 49643.

Electromechanical vibrators. 49469.

Magnetic clutches and couplings. 48070, 48826.

Magnetic motors. 47325.

Pole changing switches, arrangement and mounting of. 49860.

Spindles. 51207.

parallel running of electric generators, see ELECTRIC SUPPLY, ETC.

pole changing switches, mounting and arrangement of, see Miscellaneous (Pole changing switches).

Rotary converter and transformer systems.

No case.

soldering armature conductors to commutator segments, see METAL WORKING.

spindles for electric motors, see Miscellaneous.

stator and rotor arrangement for electrodynamic machines, see Armatures, etc.

stator coils arranging in sealed chambers, see Armatures, etc.

stators, see Armatures, etc.

synchronous machines, see Alternating etc. (Induction, etc.).

synchronous machines operating asynchronously, see MOTOR CONTROL, ETC.

synchronous motors and generators, see Alternating, etc. (Machines, etc.)

thermally responsive protective devices effecting cooling, see Cooling, etc.

vibration damping arrangement mounted in casing, see casing, etc.

windings for dynamo-electric machines, see Armatures, etc.

Earth boring drills and the like, *see* MINING, ETC.

Earth formations, means for investigating, electrically, *see* MEASURING, ETC.

Earth levelling and grading machine, *see* EXCAVATING, ETC.

Educational applices, *see* BOOKS, ETC.

Ejection seats, aircraft, *see* AERONAUTICS.

Ejectors and injectors, *see* INJECTORS, ETC.

Elastic fluid turbines, *see* TURBINES, ETC.

Electric amplifying devices, audio frequency and high frequency, semi-conductor material, *see* WIRELESS, ETC.

Electric bridge circuits, *see* TELEGRAPHS, ETC.

Electric Cable joints, *see* ELECTRIC COUPLINGS, ETC.

Electric cables, *see* CONDUCTORS, ETC.

Electric capacitors, *see* CAPACITANCES, ETC.

Electric carrier wave communication system, high frequency, *see* WIRELESS, ETC.

Electric cautery, *see* MEDICAL, ETC.

Electric circuit breakers, *see* ELECTRIC SWITCHES, ETC.

Electric conductors, joints for, *see* ELECTRIC COUPLINGS, ETC.

Electric conductors forming on insulators, *see* CONDUCTORS, ETC.

Electric connectors, *see* ELECTRIC COUPLINGS, ETC.

Electric control devices for consuming devices, *see* ELECTRIC SUPPLY ETC.

ELECTRIC COUPLINGS AND CUT-OUTS OTHER THAN ELECTROMAGNETIC AND THERMAL. LVIII(4).

bonding electric cables, *see* Electric couplings, (Couplings etc.)

cable joints, *see* Electric couplings, (Couplings, etc.)

cartridge type fuse links, *see* Cut-outs, etc.

ceiling roses, *see* Electric couplings, (junction, etc.)

ELECTRIC COUPLING, ETC.—*contd.*

Connecting devices, for electric conductors and cables, *see* Electric, etc. (Couplings, etc.).

Cut-outs (other than electromagnetic and thermal).

47183, 47803, 48131, 48906, 49250,
50338, 50654, 51435, 51458, 51459.

Electric Couplings—

Couplings other than plug and socket and like and junction boxes, etc. (including rod and wire couplings.)

47620, 48219, 48220, 48253, 48537,
48765, 49605, 50791, 50792, 50851,
51098, 51099, 52131, 52307, 52423,
52482, 53381, 53396.

Junction, inspection, test and distribution boxes, ceiling roses. 47191, 48077, 51401, 52159.

Plug and socket and like two-part readily removable couplings. 47006, 48504, 48907, 51264, 51523, 51835, 52185.

fuses, *see* Cut-outs, etc.

joining conductors by twisting together. *see* Couplings other than, etc.

joints, electric cable, *see* Electric Couplings, (Couplings, etc.)

mountings arrangements for wires and electric wiring other than plug and socket couplings and junction and like boxes, *see* Electric couplings, etc.

plug and socket connections, *see* Electric coupling, (Plug, etc.)

sealing glands for electric cable joints and terminations, *see* Electric couplings, etc.

sockets contacts, *see* Electric, etc. (Plug and socket, etc.).

ELECTRIC CURRENTS CONVERTING AND TRANSFORMING OTHER THAN BY ROTARY CONVERTERS AND ROTARY TRANSFORMERS. LVII(2).

asymmetrically conductive elements or rectifiers, *see* Converting, etc. (By varying, etc.).

contact devices for voltage regulators or transformers, *see* ELECTRIC COUPLINGS, ETC.

Converting, alternating and direct—

Arc, spark-gap and other discharge producing apparatus (including vapour and vacuum apparatus), by arrangement of.

47893, 49095, 52336.

ELECTRIC CURRENTS, ETC.—contd.

Converting, alternating, etc.—contd.

By varying resistance, inductance and capacity (including arrangements of electrolytic and contact rectifiers).

46769, 47012, 47985, 49445, 51497, 52100, 52336, 52842, 53261.

Commutator switching arrangements.
No case.

Systems of conversion (other than Arc, etc.; By varying resistance, etc. and Commutator, etc.)

47188, 50694.

crystals rectifiers, *see* Converting, etc. (By varying, etc.)

electric spark generators for internal combustion engine ignition systems, *see* INTERNAL, ETC.

magnetic sheets materials for transformer cores, producing by electrolysis, *see* ELECTROLYSIS, ETC.

metal rectifiers, *see* Converting, etc. (By varying, etc.)

rectifiers, mechanical, other than commutator switching arrangements, *see* Converting, etc. (Systems, etc.)

rectifying or changing frequency of alternating currents mechanically, otherwise than by commutator switching arrangements, *see* Converting, etc. (Systems, etc.)

semi-conductor or crystal rectifiers, *see* Converting, etc. (By varying, etc.)

Transformers—

Bases, cases and cooling and ventilation arrangements. 47591, 51303, 53054, 53061.

Cores, armatures and winding.

46503, 47173, 47975, 49418, 49831, 50107, 51303, 51698, 53002, 53054, 53061.

Regulating and constructional arrangements other than Cores, etc. Bases, etc.

48196, 49780, 50195, 51687, 53449.

Electric discharge devices, *see* VACUUM, ETC.

Electric discharge lamps, *see* VACUUM, ETC.

Electric discharge tube circuits, *see* WIRELESS, ETC.

Electric discharge tubes, *see* VACUUM, ETC.

Electric fans, *see* CENTRIFUGAL AND SCREW, ETC.

Electric filament lamps, *see* ELECTRIC LAMPS, ETC.

Electric furnaces, *see* HEATING BY ELECTRICITY.

Electric fuses, *see* ELECTRIC COUPLINGS, ETC.

Electric discharge tube circuits for interconnection in telephone exchanges, *see* TELEPHONES, ETC.

Electric filter circuits for telephone and other complex currents, *see* TELEGRAPHS, ETC.

Electric generators, *see* DYNAMO ELECTRIC, ETC.

Electric heaters, *see* HEATING BY ELECTRICITY.

Electric heating circuits, *see* HEATING BY ELECTRICITY.

Electric incandescent filament lamps, *see* ELECTRIC LAMPS, ETC.

Electric induction motors, *see* DYNAMO ELECTRIC, ETC.

Electric igniters for blasting and mining charges, *see* AMMUNITION, ETC.

Electric intelligence storage devices, *see* ELECTRIC SIGNALLING, ETC.

Electric irons, *see* HEATING BY ELECTRICITY.

ELECTRIC LAMPS, INCANDESCENT AND ARC. LXIII(1).

(This headings does not include shades reflectors and globes for which see LAMP CHIMNEYS.)

Arc lamps, 49264, 51108, 51805.

bases or caps, applying to incandescent lamps, *see* Incandescent, etc. (Caps, etc.)

Battery lamps. 51997, 52966.

caps for incandescent lamps, *see* Incandescent, etc. (Caps, etc.)

closing or sealing bulbs, *see* Incandescent, etc. (Mounting etc.)

Dynamo lamps. No case.

envelopes incandescent lamp, *see* Incandescent, etc. (Forms, etc.)

filaments of incandescent lamps, materials for, *see* Incandescent etc. (Materials etc.)

ELECTRIC LAMPS, ETC.—*contd.*

Incandescent lamps, construction of.—

Caps for bulbs (including connecting to bulbs).

47101, 48320, 49656, 49672, 51358, 51996.

Filaments, supports for (other than leading-in-wires).

51243.

Forms and materials of bulbs and gases used.

47774, 49212, 49656, 50654, 51243, 51996.

Holders. 47160, 51996, 52103, 52717.

Leading-in-wires. 48320, 51243, 51996, 52134.

Materials for filaments, their form, shape and arrangement of.

51243, 51255.

Miscellaneous. No case. ●

Mounting parts in and closing bulbs (other than attaching filaments to leading-in-wires).

50201, 50334, 50634.

Multiple filament lamps and variable connections.

47190, 50762, 51255, 51661, 52103.

Reflectors and screens within bulbs. 48596.

Renewing and repairing. No case.

leading-in-wires for bulbs, *see* Incandescent, etc. (Leading-in-wires.)

multiple filament lamps, *see* Incandescent, etc.

torches, electric, *see* Battery lamps.

Electric impedance net works for telephone and other complex currents circuits, *see* TELEGRAPHS, ETC.

Electric lamps, supporting and directing devices for, *see* LAMPS FOR LIGHTING, ETC.

Electric lighters or igniters, *see* HEATING BY ELECTRICITY, ETC.

Electric measuring instruments, *see* MEASURING & TESTING.

Electric motor control systems, *see* MOTOR CONTROL, ETC.

Electric motors, *see* DYNAMO, ETC.

Electric oscillation generators, thermionic and transistor, *see* WIRELESS, ETC.

Electric oscillations, modulators, for, *see* WIRELESS, ETC.

Electric pulse amplifiers, *see* WIRELESS, ETC.

Electric pulse code modulation system, *see* WIRELESS, ETC.

Electric pulse communication system, wireless, *see* WIRELESS, ETC.

Electric pulse counters, *see* CALCULATING, ETC.

Electric pulse counting circuits, *see* WIRELESS, ETC.

Electric pulse generators, *see* WIRELESS, ETC.

Electric pulse responsive switches for remote control systems, *see* ELECTRIC SIGNALLING, ETC.

Electric relays, contact making, *see* ELECTRIC SWITCHES, ETC.

Electric resistance furnace, *see* HEATING BY ELECTRICITY, ETC.

Electric resistance heaters, *see* HEATING BY ELECTRICITY.

Electric selector switches for telephones, *see* TELEPHONES, ETC.

Electric signal storage devices, other than telephones, *see* ELECTRIC SIGNALLING, ETC.

ELECTRIC SIGNALLING SYSTEMS AND APPARATUS, OTHER THAN TELEGRAPHS AND TELEPHONES. LI(2).

alternating current signalling between stations, *see* Selective, etc.

Annunciators or indicators and alarm, (fire, police and like systems). 48929, 50540, 50881.

call bells or like signalling apparatus, *see* Annunciators, etc.

electric intelligence storing devices, *see* Selective, etc.

electric switching arrangements for signalling systems than construction of switches *see* Selective, etc.

magnetic storage devices, *see* Selective, etc.

Non-selective signalling systems. 48410, 50541.

pulse responsive switches for remote control system, *see* Selective, etc.

registers for receiving and storing data, *see* Selective, etc.

remote control systems, electric, *see* Selective, etc.

ELECTRIC SIGNALLING, ETC.—*contd.*

Selective signalling and distant control systems (comprising means for transmitting or receiving a choice of signals or effects).

46482, 46700, 46798, 47159, 47280,
47343, 47344, 47345, 47753, 47754,
47755, 47756, 48196, 48467, 48489,
48490, 48539, 48664, 48695, 48996,
49414, 49626, 49627, 49842, 49931,
50195, 50541, 50799, 50834, 50835,
50836, 50837, 50838, 51072, 51087,
51116, 51249, 51309, 51310, 51311,
51351, 51470, 51514, 51562, 51591,
51821, 51859, 51952, 51956, 52098,
52153, 52158, 52289, 52368, 52567,
52752, 52919, 52960, 53014, 53040,

servo-systems, electric *see* Selective, etc.

shaft positioning devices for remote control systems, *see* MECHANISM MISC.

signal storage systems, *see* Selective, etc.

switching arrangements for electric signalling systems, excepting construction of switches, *see* Selective, etc.

testing arrangements for wide band signalling systems, systems for, *see* Selective, etc.

Electric spark generators for internal Combustion engine ignition systems, *see* INTERNAL, ETC.

ELECTRIC SUPPLY AND TRANSMISSION SYSTEMS AND APPARATUS. LVII (3).

alternate series systems of mechanically coupled generators and motors, *see* Electro mechanical, etc.

balancing supply system voltages, *see* Systems, etc.

boosting, *see* Systems, etc.

Charging and controlling storage batteries.

49497, 51065.

Conductors, arrangement and utilisation of for transmission and distribution and for installation wiring. 46508.

discharge lamp operating circuits, *see* Systems, etc. (Systems, etc.)

dynamos and motors coupled for power-transmission, *see* Electro-mechanical, etc.

ELECTRIC SUPPLY, ETC.—*contd.*

electric controlling loads on generators, devices for, *see* Systems for, etc. (Automatic, etc.)

electrolytic cells, power supply and automatic regulations systems for, *see* Systems, etc. (Automatic, etc.)

electromagnetic voltage regulators, automatic, *see* Systems, for, etc. (Automatic, etc.)

Electromechanical and electric systems for transmitting mechanical power. 48653, 49496, 50516, 50705, 51061, 51325.

equalisation of potential and current, *see* Systems, etc.

harmonics, means for eliminating from mains supply circuits, *see* TELEGRAPHS, ETC.

light house lamps, electric flasher circuits for, *see* Systems, etc. (Automatic, etc.)

lightning arrestors, *see* Protective, etc.

lightning arrestors, gas discharge tubes for, *see* VACUUM, ETC.

motor control systems, *see* MOTOR CONTROL, ETC.

over-voltage arrestors, *see* Protective, etc.

over-voltage arrestors, electric discharge tubes for, *see* VACUUM, ETC.

parallel running of generators, equalising load in, *see* Systems, etc.

protective arrangement for D. C. motor systems, *see* Protective, etc.

Protective arrangements (other than those with automatic circuit breakers or other safety switches).

46813, 47441, 47590, 47731, 51420,
52294, 52854, 52995, 53025.

radio or television apparatus, circuits for supplying current to, *see* Systems for, etc. (Systems, etc.)

sound signals automatic electric flasher circuits, for, *see* Systems, etc. (Automatic, etc.)

starting circuits for discharge lamps, *see* Systems for, etc. (Systems for Vacuum, etc.).

step-by-step electric driving mechanisms, *see* Electromechanical, etc.

surge arresters, *see* Protective, etc.

ELECTRIC SUPPLY, ETC.—concl'd.

Systems for supplying and controlling consuming devices (other than motive power plant and storage batteries)—

Automatic systems of regulation.

46476, 48075, 48496, 49296, 49900,
50260, 50357, 50637, 50705, 50963,
51072, 51301, 51302, 51473, 51643,
52180, 52711, 52766, 52892, 53261,
53380, 53406.

Non-automatic systems of regulation
47322, 51643.

Systems for vacuum discharge apparatus.

46503, 46860, 47441, 47447, 47746,
47747, 47844, 48310, 49073, 49712,
49742, 52257, 52359, 52414.

systems of wiring, *see* Conductors.

thyatron controlled rectified power supply units, *see* Systems for, etc. (Automatic, etc.)

voltage breakdown protective devices, *see* Protective, etc.

voltage regulators, automatic, *see* Systems, etc. (Automatic, etc.)

voltages balancing, *see* Systems, etc. (Automatic, etc.)

ELECTRIC SWITCHES AND ELECTROMAGNETIC AND THERMAL CUT-OUTS (EXCEPTING SELECTOR SWITCHES FOR TELEPHONES). LIX(1).

air circuit breakers, *see* Oil-break, etc.
arc extinguishing devices, *see* Spark-preventing, etc.

Automatic circuit breakers and other switches tripped or released by electrical means, re-set by hand or by power, and retained set against the action of springs or gravity.

47028, 47029, 49237, 50092, 52214,
52483, 53354.

bi-metallic thermal switches, *see* Thermal switches, etc.

cabinets for electric switches, *see* Switch bases, etc.

circuit breakers, thermal, *see* Thermal, etc.

circuit breakers, ore quenching of extinguishing devices for, *see* Spark-preventing, etc.

clock-operated delay switches, *see* Miscellaneous.

ELECTRIC SWITCHES, ETC.—cont'd.

cold cathodegas tube switching circuits for wireless circuits, *see* WIRELESS, ETC.

contact assemblies for electric switches, *see* Switch bases, etc.

contact breakers, automatic, *see* Automatic, etc.

contacts for of switches, arrangement of, *see* Switch bases, etc.

contact strips, *see* Switch bases, etc.

Cut-outs or protective systems with safety switches and cut-outs controlled by variations in the conditions of the circuit.

46672, 47115, 47803, 50338, 51997,
52455.

delay switches, gas pressure actuated, *see* Miscellaneous.

door switches, snap action type, *see* Snap action, etc.

electric contact members, mounting of, *see* Switch bases, etc.

Electrolytic interrupters.

No case.

Electromagnetic and magnetic switches (other than automatic circuit breakers dripped, etc., and cut-outs or protective systems with safety switches, etc.)

47325, 47738, 47986, 48057, 58097,
48763, 49294, 49404, 49471, 49780,
50441, 50764, 51267, 51764, 52455,
52650, 52741.

fuse cut-outs mounting and arranging in isolating and like switches, *see* Cut-outs, etc.

gas pressure actuated switches, *see* Miscellaneous.

liquid immersed circuit brakers, *see* Oil break, etc.

Make and break switches, mechanical, adapted for continuous operation.
51124.

Mechanical switches inert without spring (including switches operated by tilting, by vibration or by gravity).
47115, 50181, 52215.

Mechanical switches, retained set against quick action spring or gravity return, by batches, overset parts and friction grip and other mechanical devices.

48664, 48982, 49472, 49526, 49860,
50141, 52425.

ELECTRIC SWITCHES, ETC.—contd.

Mercury and other conducting liquid switches.

52953.

metal containers for circuit breakers, switches and the like, *see* Switch bases, etc.

Miscellaneous—

Clock-operated switches. 49779.

Gas or air pressure operated switches. 49059, 49492, 50650, 51997.

Momentary contact switches (mechanical switches which in single stroke of operating member make and break a circuit once or a definite number of times).

No case.

Oil-break, air-break and other high temperature and heavy current switches.

46902, 46964, 48998, 49059, 49597, 50181, 50640.

Press-button and other mechanical switches which retract upon removal of operating force.

No case.

rotary switches retained set against spring action, *see* Mechanical switches, etc.

Snap-action switches (springs, during a single "on" and "off" operation are first strained and then relaxed to assist or to produce switching movement).

47040, 47256, 47542, 47700, 48878, 49419, 50135, 53132.

Spark-preventing and arc-rupturing devices.

46902, 48264, 49597, 53354.

spring assemblies for contact switches, *see* Switch bases, etc.

Switch bases, covers, cases and contact members, construction of.

48982, 50526, 50527, 50528, 51123, 51139, 51248, 51478, 52481, 52533, 53263.

Switch-boards and equivalent switch-gear structures.

50298, 51138.

Thermal switches, cut-outs and inter-rupters.

46654, 46709, 47028, 47029, 47114, 51876, 52986, 53443.

ELECTRIC SWITCHES, ETC.—concl'd.

tumbler switches snap-action, *see* Snap-action, etc.

Electric switching arrangements for signalling systems, excepting construction of electric switches, *see* ELECTRIC SIGNALLING, ETC.

Electric traction, *see* RAILWAY AND TRAMWAY PERMANENT, ETC.

Electric wave generators, for wireless systems, *see* WIRELESS, ETC.

Electric well logging apparatus, *see* MEASURING TESTING, ETC.

Electrical insulating composition, *see* CONDUCTORS, ETC.

Electrical bore hole logging apparatus, *see* MEASURING, ETC.

Electrical resistances, *see* CAPACITANCES, ETC.

Electrical storage of intelligence, systems for, *see* ELECTRIC SIGNALLING, ETC.

Electrically operated fluid flow control valves, *see* VALVES, ETC.

Electrically propelled rail vehicles, *see* RAILWAY, ETC. VEHICLES, ETC.

Electro deposition of metals, *see* ELECTROLYSIS.

Electrode pastes, *see* PLASTIC, ETC.

Electrodes for accumulators, *see* BATTERIES, ETC.

Electrodes for arc lamps, *see* ELECTRIC LAMPS, ETC.

Electrodes for electric discharge devices, *see* VACUUM, ETC.

Electrodes for electric furnaces, *see* HEATING BY ELECTRICITY, ETC.

Electrodes, precipitator collecting, *see* MAGNETIC, ELECTROSTATIC, ETC.

Electrodes for galvanic cells, *see* BATTERIES, ETC.

Electrodes for welding, *see* METAL WORKING.

Electrodynanic machines, *see* DYNAMO-ELECTRIC, ETC.

Electro-luminescent lighting devices, *see* VACUUM, ETC.

ELECTROLYSIS AND ELECTRO-DEPOSITION. LVIII(5). ELECTROLYSIS, ETC.—*contd.*

anodising metals, *see* Processes, (Miscellaneous).

Cells receptacles and apparatus, other than diaphragms and electrodes. 48569, 48650, 49026, 51782, 52010, 53268, 53400.

cleaning ferrous sheet metal, electrolytically, *see* Processes. (Miscellaneous.)

Diaphragms and electrodes, forms, construction and mounting of. 47215, 47444, 48818, 48876, 49026, 49892, 49921, 50420, 50814, 52912, 53400.

electric supply and regulation systems for electrolytic cells, *see* ELECTRIC SUPPLY, ETC.

electrodes and diaphragms arrangement and mounting of, *see* Diaphragms, etc.

metallic oxides salts and like obtaining by electrolysis, *see* Miscellaneous.

metals and alloys, electro deposition of, *see* Processes, etc. (Metals, etc.)

Microporous material for diaphragms, *see* Diaphragms, etc.

paste for making electrodes, *see* PLASTIC, ETC.

phenol para-amino. electrolytic preparation of, *see* Non-metallic, etc.

pickling or cleaning metal surfaces prior to electro deposition of metals, *see* INCRUSTATION, ETC.

Processes—

Electro-osmotic. No case.

Fused electrolytes, metals, obtaining from. 46525, 47215, 48146, 48211, 48212, 49026, 49775, 50387, 50797, 51228, 51291, 51663.

Liquids, treating for purifying and like purposes. 50492.

Metals and alloys, obtaining and depositing from aqueous electrolytes.

46738, 47952, 47953, 48342, 48424, 49333, 49355, 49696, 49776, 50201, 50221, 50611, 51338, 51399, 51524, 51650, 51678, 51833, 51972, 52381, 52506, 53401.

Miscellaneous—

Anodizing metals. 48108, 49000, 50889.

Cleaning ferrous sheet metal, electrolytically. 48345.

Processes—*contd.*

Miscellaneous—*contd.*

Metallic oxides salts and like obtaining by electrolysis. 52394.

Metals obtaining by reaction between metal halide vapours and reducing metals in electric cells. 51228.

Pickling apparatus. 50729.

Regeneration of baths. 48342, 48499, 53390.

Rust removing electrolytically. 51515.

Non-metallic substances, obtaining and depositing. 46524, 47982, 48818, 51782, 52631, 52912, 53195.

Organic solutions treating (other than liquids treating for purifying). 50814, 51189, 52631, 53122,

regeneration of electrolytic baths for production of metal oxides and like, *see* Processes (Miscellaneous).

treating or modifying metal surfaces prior of electro deposition, *see* TINKING, ETC.

Electrolytic capacitances, *see* CAPACITANCES, ETC.

Electromagnetic brakes, *see* BRAKES ETC.

Electromagnetic horns for propagating micro-waves, *see* WIRELESS, ETC.

Electromagnetic locking bolts for doors, *see* FASTENINGS, ETC.

Electromagnetic relays, *see* ELECTRIC SWITCHES, ETC.

Electromagnetic relays. *see* Electric Switches, etc.

Electromagnetic sound heads, *see* PHONOGRAPHS, ETC.

Electromagnetic switches, other than telephone, *see* ELECTRIC SWITCHES, ETC.

Electromagnetic voltage regulators, *see* ELECTRIC SUPPLY, ETC.

Electron beam tubes, *see* VACUUM, ETC.

Electron discharge devices, *see* VACUUM, ETC.

Electronic counter circuits, *see* CALCULATING, ETC.

Electronic counters, *see* CALCULATING, ETC.

Electronic ringing current and low generators, *see* WIRELESS, ETC.

- Electronic tubes, *see* VACUUM ETC.
- Electronic valve amplifiers, *see* WIRELESS, ETC.
- Electro-optical image converter tubes, *see* VACUUM, ETC.
- Electroplating apparatus, *see* ELECTROLYSIS, ETC.
- Electroplating apparatus, *see* ELECTROLYSIS, ETC.
- Electrostatically coating with paints and lacquers, *see* PAINTS, ETC.
- Elemadienolic acid and its derivatives, *see* CARBON COMPOSITION.
- Elevators, protective mechanisms for doors of, *see* LIFTING, ETC.
- Embossed printing, *see* PRINTING, ETC.
- Embossing paper card board and the like, *see* PRINTING, ETC.
- Embroidery, *see* SEWING, ETC.
- Emulsified bitumen, *see* BITUMINOUS ETC.
- Emulsions, other than bituminous, *see* CHEMICAL PROCESSES, ETC.
- Enamels and enamelling, *see* GLASS, ETC.
- Enamels for insulating electric conductors, *see* CONDUCTORS, ETC.
- Enciphering devices for telegraphy, *see* TELEGRAPHS, ETC.
- Enciphering devices for wireless signalling, *see* WIRELESS, ETC.
- Endless belt conveyors, *see* LIFTING, ETC.
- Endless load conveying apparatus, *see* LIFTING, ETC.
- Endless tracks for tractors, and like vehicles, *see* LOCOMOTIVES, ETC.
- Endless track vehicles, *see* LOCOMOTIVES, ETC.
- Engine turning gear, internal combustion, *see* INTERNAL COMBUSTION, ETC.
- Envelopes electric discharge device, *see* VACUUM, ETC.
- Enzymes, *see* CARBON COMPOUNDS, ETC.
- Epicyclic gearing, *see* MECHANISM MISCELLANEOUS.
- Epicyclic power transmission mechanism arranging and mounting in motor vehicles, *see* MOTOR VEHICLES.
- Epidiascopes, *see* PHILOSOPHICAL, ETC.
- Erythromycin, *see* DISINFECTING, ETC.
- Esters, *see* CARBON COMPOUNDS, ETC.
- Etching, *see* PRINTING.
- Ethyl toluenes, *see* CARBON ETC.
- Ethylene dichloride, *see* CARBON COMPOUNDS, ETC.
- Ethylene polymers, *see* CARBON COMPOUNDS, ETC.
- Evaporating and distilling liquids, *see* DISTILLING, ETC.
- EXCAVATING. XXVIII(1).**
- (*Excepting AGRICULTURAL implements, Boring earth and rock*).
- Blasting. 49492, 50650, 51476, 51797.
- coal cutting machines, *see* Miscellaneous.
- compacting soil, *see* Miscellaneous.
- Digging, picking, channelling and slitting apparatus (including rotary scrapers), other than agricultural implements. 48446, 49387, 49786, 50469, 52298.
- Discharging soil. 48446.
- earth levelling and grading machine, *see* Digging, etc.
- Endless chain machines. 47147, 48100, 48709, 53050.
- face conveyors for coal mines, *see* Endless, etc.
- Grab and scoop-arm machines. 52070.
- hydraulic giants, *see* Hydraulic mining, etc.
- Hydraulic mining and scouring apparatus (including methods in which water breaks away the ground; jet apparatus and sinking caissons, piles, and shafts by jetting). 52083.
- Miscellaneous—
- Coal cutting machine. 46799, 48794.
- Compacting soil. 52082.

EXCAVATING. XXVIII(1)—contd.

Miscellaneous—contd.

- Water infuser apparatus for laying dust in mines. 50790.
- plugs for stemming shot holes in blasting operation, *see* **Blasting**.
- scraper for digging purposes, *see* **Digging**, etc.
- scraper conveyors, *see* **Endless**, etc.
- stemming shot holes in blasting operations, plugs for, *see* **Blasting**.
- Exchanges, telephone, *see* **TELEPHONES**, ETC.
- Exhausters for vacuum braking systems, *see* **BRAKES**, ETC.
- Exothermal chemical reactions effecting, *see* **CHEMICAL PROCESSES**, ETC.

EXPLOSIVES AND PYROTECHNICS. XXXIX(3).

- blasting and military detonators, other than compositions, *see* **AMMUNITION**, ETC.
- detonators, other than compositions, blasting and mining, *see* **AMMUNITION**, ETC.
- Explosive materials and compositions, containing liquid air or liquid oxygen. No case.
- Explosive materials and compositions other than containing liquid air or liquid oxygen. 46899, 48978, 49071, 49266, 50617, 50731.
- initiating compositions for detonators, badazide containing, *see* **Explosives**, etc., other than, etc.
- Miscellaneous—
 - Blank-crackers. 50248.
 - Transporting liquid explosives. 50070.
- Pyrotechnic apparatus and pyrophoric and flash light compositions and ribbons. No case.

F

- Fabric assemblies, fused, *see* **PROOFING**, ETC.
- Fabrics and fibres textile treating with liquid, *see* **DYEING**, ETC.
- Fabrics and yarns impregnating with resins, *see* **PROOFING**, ETC.
- Fabrics compound and compound sheet material, *see* **PROOFING**, ETC.

FABRICS FINISHING AND TESTING. XXII(2).

17331, 48291, 49065, 49455, 49504
50088, 50920, 51660, 51885, 52101,
52137, 52216, 52276, 53244, 53245.
53273.

- Fabrics embossing by effects in, *see* **PRINTING**, ETC.
- Fabrics, mixed textile, *see* **PROOFING**, ETC.
- Fabrics printing, textile, *see* **PRINTING**, ETC.
- Fabrics, rendering water repellent, *see* **PROOFING**, ETC.
- Fabrics textile, bleaching, dying or like fluid treatment of, *see* **DYEING**, ETC.
- Fabrics, textile treating in gaseous medium, *see* **DYEING**, ETC.

FABRICS, WOVEN. XXI(1).

47024, 48028, 48317, 48318, 48966,
51568, 52038, 52358, 52985, 53231,
53278, 53355, 53357.

- belting, adhesive bonded multiple fabric, *see* **PROOFING**, ETC.
- woven fabrics coating with thermoplastic composition, *see* **PROOFING**, ETC.
- Facsimile scanning apparatus, *see* **TELEGRAPHS**, ETC.
- Facsimile telegraph systems, *see* **TELEGRAPHS**, ETC.
- Fan guards, *see* **CENTRIFUGAL**, ETC. **PUMPS**.
- Fan regulators, electric, *see* **MOTOR CONTROL**, ETC.
- Fans, electric, *see* **CENTRIFUGAL AND SCREW**, ETC.

FARES AND ADMISSION FEES, CHECKING AND SPEED INDICATORS. XLI(5).

47065, 47151, 47706, 47707, 47714,
47732, 49316, 51397.

- Farm tractors, *see* **AGRICULTURAL**, ETC.
- Fastenings for securing rails to sleepers, *see* **RAILWAY**, ETC. **PERMANENT**, ETC.

FASTENINGS, MISCELLANEOUS. FASTENINGS, ETC.—contd.**LXIV(4).**

(Comprising only connections of a temporary character, readily releasable and not forming part of structures secured.)

This heading does not include bale fasters. **BOLTS; CHAINS; DOOR AND GATE OPERATING APPLIANCES; DRESS FASTENINGS; LOCKS; NAILS AND ROPES AND CORDS.**

Automatically operated railway carriage door fastenings.

No case.

Clips and clamps. 47362, 47737, 48273, 48465, 49919, 50305, 51158, 52594.

Doors and windows, special fastenings for, not covered by other subdivisions. 47195, 48198.

Hasp and like hinged and pivoted fastenings. 47178, 48766, 48872, 49421.

key rings, *see* Miscellaneous.

latch mechanism of rotatable bolt type for motor vehicle doors, *see* Doors, etc.

locking bolts for carriage and other doors, *see* Sliding, etc.

Miscellaneous—

Key rings, 48288, 50930.

Metals fittings for suitcases. 53283.

Releasable fastenings for cords, belts and the like. 49369.

Resilient fasteners for plates. 51282.

Sliderless clasp fastener. 51112.

Sliding clasp fasteners. 47001, 47671, 48116, 48518, 48533, 49269, 49508, 49655, 50261, 50866, 52317, 52754.

Multiple fastenings. No case.

Operated or controlled from distance.
No case.

Seal fastenings. No case.

slide fasteners, applying anodised coatings on, *see* **ELECTROLYSIS, ETC.**

sliderless clasp fasteners, *see* Miscellaneous.

Sliding bolts and latches. 48198, 48439, 49393, 49408, 50657, 53065.

sliding clasp fasteners, *see* Miscellaneous.

Stud or ball and eye or socket fastenings.

No case.

FATS AND FATTY OILS (EXCLUDING BUTTER AND THE LIKE). XI(1).

(Steps in the production of fats and fatty oils involving improvements in connection with aerating, cooling, crushing and grinding, distilling, drying, filtering, mincing, mixing, moulding and preserving are indexed under headings denoting such operations).

Compositions containing fats and fatty oils and drying oils. 48267, 49994, 51780.

Extracting and obtaining (other than recovering from waste products)—

By pressure. 47194, 47644, 49187, 49188, 49433, 50297.

By solvents. 46714, 46793, 47061, 49187, 49188, 50438, 51190, 53213.

Hydrogenated and modified fats and fatty oils. 46755, 47382, 47456, 48529, 48879, 49140, 50809, 50810, 51783, 52251.

Purifying. 46554, 47802, 48530, 48712, 49006, 49358, 51768, 51783, 52316, 53213.

fatty acids excepting fatty acids for soap and candle making, *see* **CARBON COMPOUNDS, ETC.**

Recovering from waste products. 47644.
refining, *see* Purifying.

solvent extraction of oils and fats, *see* Extracting, etc. (By solvent).

Fatty acids (oleic and the like), *see* **WAXES, ETC.**

Fatty acids, excepting fatty acids for soap and candle making, *see* **CARBON COMPOUNDS, ETC.**

Fatty acids for soap and candle making, *see* **WAXES, ETC.**

Faucets, *see* **VALVES, ETC.**

Feed water for boilers and steam generators, heating, *see* **HEATING SYSTEMS, ETC.**

Feed water for boilers, means for supplying and controlling, *see* **STEAM GENERATORS.**

Feeding bottles, *see* **BOTTLES, ETC.**

FENCING, TRELLIS AND WIRE NETTING. XXVII(2).

46485, 48622, 51501, 51706.

rails for fencing or railing, *see* BUILDINGS, ETC.

Fermenting organic waste materials to obtain compost, *see* MANURES, ETC.

Ferro-alloys, *see* ALLOYS, ETC.

Ferromagnetic materials for making magnets and electromagnets, *see* DYNAMO, ETC.

Ferromanganese, *see* ALLOYS.

Ferrous alloys, *see* ALLOYS.

Ferrous calcium citrate complex, *see* CARBON, ETC.

Fertilizers, *see* MANURES, ETC.

Fertilizers and insecticides, means for introducing in soil, *see* AGRICULTURAL, ETC.

Fibre laps, making, *see* SPINNING, ETC.

Fibre softening machines, *see* SPINNING, ETC.

Fibres artificial or synthetic, *see* CELLULOSE, ETC.

Fibres attenuating, *see* SPINNING, ETC.

Fibres, bleaching, *see* DYEING, ETC.

Fibres degumming by treating with liquids and gases, *see* DYEING, ETC.

Fibres, hairs abrasives and like applying in carrier under electrostatic field, *see* PROOFING, ETC.

Fibres, impregnating with resinous compositions, *see* PROOFING, ETC.

Fibres, proofing against moisture fungic chemicals and vermin, *see* PROOFING, ETC.

Fibres, stripping from stalk, *see* SPINNING, ETC.

Fibres, synthetic, *see* CELLULOSE, ETC.

Fibres treating with liquid and gases, *see* DYEING, ETC.

Fibres, uniting by adhesives, *see* PROOFING, ETC.

Fibrous cement sheets moulding, *see* MOULDING, ETC.

Fibrous materials bleaching, *see* DYEING, ETC.

Fibrous pads, upholstery, *see* FURNITURE.

Filaments and fibres, artificial or synthetic, *see* CELLULOSE, ETC.

Filaments and threads, crimping, *see* SPINNING, ETC.

Filaments and threads, treating with liquids, *see* DYEING, ETC.

Filaments artificial, *see* CELLULOSE, ETC.

Files and rasps, *see* HAND TOOLS.

Files and rasps making, *see* METAL WORKING.

Files, document and the like, *see* FILING, ETC.

Filing cabinets, *see* FURNITURE.

FILING PAPER AND LIKE SHEETS. XLII(3).

46478, 46611, 48203, 48204, 48830, 49623, 50452, 50456, 50661, 50668, 52301, 52539.

Filing tools, making, *see* METAL WORKING.

Filing tools, metal and like, *see* HAND TOOLS.

Filling solids into dispensing containers, *see* STOPPERING, ETC.

Films, cellulose derivative, *see* CELLULOSE, ETC.

Films or fibres, synthetic, *see* CELLULOSE, ETC.

Films, printing pictures by imbibition on, *see* PRINTING.

FILTERING AND STRAINING LIQUIDS. VI.

Block filters (comprising apparatus in which filtering materials consist of earthenware, stone and other rigid-porous materials and compositions). 47030.

cellulose or paper pulp filters, *see* Filters with loose, etc.

centrifugal strainers and separators, *see* CENTRIFUGAL MACHINES, ETC.

centrifuges, *see* CENTRIFUGAL MACHINES, ETC.

FILTERING AND, ETC.—contd.

- Filter and contact beds. No case.
 filter discs tacked or superimposed,
 filter having, see **Unclassified, etc.**
 Filter presses. 52016, 52017, 52903.
 Filters with loose filtering materials
 (other than filter and contact beds).
 53348.
 Media, filtering. 48628, 53301.
 microporous screens for filter presses,
 absorbent baffles or buffers, see **Media,**
etc.
 Moving filters (including centrifugal
 filters). 48162, 48953, 49074, 50696,
 50862, 50977, 51676, 51817, 53127,
 53301.
 Presses for separating liquids from solids
 by compression. 53301.
 rotary drum suction filters, see **Moving,**
etc.
 rotary filters, see **Moving filters, etc.**
 Separating liquids from liquids, solids
 and mixtures by gravity only, appa-
 ratus for. 50254, 51485, 51851.
 Separating suspended magnetic parti-
 cles from liquids by magnetic means,
 see **MAGNETIC, ETC.**
 Strainers and filters having sheet filter-
 ing materials (including grids and
 greating but not rigid porous mate-
 rials). 46460, 47030, 48020, 48021,
 48251, 48350, 48359, 48565, 48869,
 48983, 49289, 50021, 51838, 52086,
 52641, 52679.
 Tube well strainers and like (strainers
 on pipes). 48692, 50817, 51323, 52682.
 Unclassified types of filters—
 Filter thickening plant. 51920.
 Filtering with active carbon. 46554.
 Filters with stacked filter discs.
 48090.
 Filter, networks for telephone and other
 complex currents, see **TELEGRAPHS,**
ETC.
 Filters for colour cinematography, see
CINEMATOGRAPHY.
 Filters for colour photography, see **PHOTO-**
GRAPHY.
 Finishes and sizes other than resin sizes,
 textiles and paper, see **ADHETIVES,**
ETC.
 Fire arms, see **SMALL ARMS.**

Fire bricks, see **BRICKS, ETC.**

Fire bricks, for refractory linings, see
CEMENT, ETC.

**FIRE EXTINGUISHING AND PREVENT-
ING. XXXIX(4).**

47443, 47494, 47592, 51916.

Fire proofing fabrics and other permeable
 materials, see **PROOFING, ETC.**

Fire retardant compositions, see **PROOF-**
ING, ETC.

FISH AND FISHING. XIV(4).

48591.

Flame machining metal surfaces, see
METAL WORKING.

Flash lamps, electric, see **ELECTRIC**
LAMPS, ETC.

Flashlight attachment for photographic,
 cameras, see **PHOTOGRAPHY.**

Flasks and boxes, moulders', see **CAST-**
ING, ETC.

Flipflop circuits, electrical counting, see
CALCULATING, ETC.

Flipflop circuits, for wireless signalling, see
WIRELESS, ETC.

Floating costumes or buoyant garments,
 see **LIFE SAVING, ETC.**

Floating docks, see **HYDRAULIC ENG.,**
ETC.

Floor covering, see **BUILDINGS, ETC.**

Flour and meal treating, see **GRAIN, ETC.**

Flour mills, see **GRINDING, ETC.**

Flour, production and treatment of, see
GRAIN, ETC.

Fluid flow regulating and distributing.
 valves for, see **VALVES, ETC.**

Fluid meters, flow velocity measuring, see
HYDRAULIC ENGINEERING, ETC.

Fluid pressure actuated brakes, see
BRAKES, ETC.

Fluid pressure actuated systems hydraulic,
 see **HYDRAULIC PRESSES, ETC.**

Fluid pressure power transmission devices,
 see **HYDRAULIC PRESSES, ETC.**

Fluidizing substances for reactions, appa-
 ratus for, see **CHEMICAL PROCESSES,**
ETC.

Fluorescent lamps, see **VACUUM, ETC.**

Fluxes for metal working, see **METAL**
WORKING.

Fly wheel starters for internal combustion engines, see INTERNAL, ETC.

Flyers for textile speed frames, see SPINNING, ETC.

Foam generating devices for fire extinguishing, see FIRE EXTINGUISHING, ETC.

Foaming, inhibiting in steam boilers, see STEAM GENERATORS.

Fodder for animals, see ANIMALS, ETC.

Folding non-metallic sheets and boards, see FABRICS FINISHING, ETC.

Fold-lines forming in fibres boards and sheets, see FABRICS FINISHING, ETC.

Food animal, see ANIMALS, ETC.

Food grains, treating, see GRAINS, ETC.

FOOD PREPARING AND PRESERVING. **XIV(5).**

(This heading does not include tea and like preparations and substitutes. Steps in the process of food production such as bottling, concentrating or distilling, cutting or mincing, drying, emulsifying, filtering, flavouring, grinding, mixing, moulding, and packing are indexed under headings denoting such operations.)

brightening foods, see Food preserving, etc., (Miscellaneous).

chocolate making, see Food preparations (Dairy, etc.).

Food preparations—

Cereals, vegetable, fruit and confectionary. 46497, 47087, 47580, 47902, 48082, 48903, 49441, 49838, 49839, 49891, 50090, 50805, 50805, 51525, 53319.

Dairy food. 46995, 47035, 47580, 48267, 48879, 48903, 49225, 49433, 49735, 49839, 49994, 50879, 50931, 51525, 51780.

Meat fish and eggs. 46867, 48903.

Yeast and yeast extracts. 46497, 49918.

Food preserving, sterilising and conditioning—

By cooling and cold storage. 49227.

By gases and vapours. 48308, 50122, 52810.

FOOD PREPARING, ETC.—contd.

Food preserving, etc.—contd.

By heating, cooking or drying. 47433, 49227, 49838, 50122, 51802, 52810, 53011, 53319.

By treating with liquid preservatives. 46743, 48261, 48308, 50780, 52404.

Miscellaneous—

Antioxidants for food products. 52404.

Brightening food stuffs. 47380.

Covering device. 53033.

Extracting, concentrating and preserving citrus fruit juices. 52987.

Food stabilizers. 50780.

Heating and sealing hermetically in containers, under vacuum. 51802, 52946.

Storage receptacles and chambers.

No case.

food product similar to human milk, see Food preparation (Dairy, etc.).

margarine, see Food preparation (Dairy food).

Food stuffs animal, see ANIMALS, ETC.

Footwear, see BOOTS, ETC.

Formaldehyde, see CARBON COMPOUNDS, ETC.

Formazans, see CARBON COMPOUNDS, ETC.

Formic acid, see CARBON COMPOUNDS, ETC.

Foundations for buildings and structures, see BUILDINGS, ETC.

Foundry moulds, see CASTING, ETC.

Fountain pens, see WRITING, ETC.

Frames, spectacles, see SPECTACLES, ETC.

Free-piston engines internal-combustion operated, see INTERNAL, ETC.

Free-piston gas generators, internal-combustion operated, see INTERNAL, ETC.

Frequency measurements, electric, see MEASURING AND, ETC.

Frequency spectrum analysers, electric, see MEASURING, ETC.

Friction clutches and couplings, see MECHANISM-MISCELLANEOUS.

Friction gearing, see MECHANISM MISCELLANEOUS.

Froth breaking process and apparatus, see CHEMICAL PROCESSES, ETC.

Fructose, *see* SUGAR.

Fruit juices, extracts, syrups and lemonades, *see* BEVERAGES, ETC.

Fruit juices, preserving, *see* FOOD PREPARING, ETC.

Fruit pulp preserving, *see* FOOD, ETC.

Fuel atomizers for internal combustion engines, *see* INTERNAL, ETC.

Fuel cells for converting carbon into electrical energy, *see* BATTERIES.

Fuel gas producing from sewage, *see* SEWAGE, ETC.

FUEL MANUFACTURE OF. XXXII(2).

(*Excepting* COKING, AND GAS MANUFACTURE.)

combustible jelly, hydrocarbon, *see* Solidified, etc.

Gaseous fuel. 47769, 48058, 48736, 49702, 50588.

Liquid fuel preparations (other than solidified and gelatinised oils). 47619, 47769, 47904, 47905, 47995, 48034, 48058, 48209, 48629, 49027, 49217, 49769, 50027, 50028, 50030, 50475, 51214, 51566, 52169, 52275, 52438, 52964, 53125.

petrol gas plants, *see* Gaseous fuels, etc.

Solid and powdered fuels (other than solidified and gelatinised oils)—

From various forms of carbon (comprising coal, lignite, carbonaceous shales, coke, charcoal and soot). 47609, 48076, 49277, 49282, 49729, 50734, 51237, 52448, 53133, 53420.

Other than from various forms of carbon.

No case.

Solidified and gelatinised oil fuels.

49140, 51496.

Fuel pumps, internal combustion engines, *see* INTERNAL, ETC.

Fumigating compositions, *see* DISINFECTING, ETC.

Fungicidal compositions, *see* DISINFECTING, ETC.

Furfural producing, *see* CARBON COMPOUNDS, ETC.

FURNACES AND KILNS. XXXI.

(*Excepting* BURNERS, and STOVES, converters, metallurgical are indexed under IRON & STEEL, ETC.)

Air heating furnaces. 53335.

cars, tunnel kiln, *see* Charging, etc.

Casings, walls, arches and roofs.

46910, 47789, 47827, 48749, 48965, 53433.

Charging, discharging and fuel feeding.

46833, 47882, 49816, 50678, 51383, 51410, 51786, 51928, 52243, 52513.

clinkers, removing, *see* Miscellaneous.

combustion control apparatus for oil burning furnaces, *see* Liquid, etc.

Crucibles and melting pot furnaces.

No case.

Doors, lids, door frames and furnace front.

No case.

draught promoting appliances, *see* Miscellaneous.

driving mechanisms for stokers, *see* MECHANISM MISCELLANEOUS.

Firebars, grates, fire-bridges and ash-pans.

47877, 48260, 49214.

Furnaces of miscellaneous type—

Boiler furnaces. 50494, 50601, 53361.

Combined stack furnace and fire box. 50235.

Furnaces for treatment of substances subject to chemical reactions.

49123, 52254.

Glass-melting furnace. 48311, 48965.

Synthesis furnace for catalytic hydrogenation of carbon monoxide.

47608.

heat recovering from waste gases from furnaces, heat exchangers for, *see* HEATING SYSTEMS, ETC.

Kilns, brick, pottery and like and tunnel furnaces.

50402, 50403, 51184, 51487, 52021.

Liquid and gaseous fuel combustion apparatus.

47827, 49170, 49220, 49988, 53360.

oil burning furnaces, *see* Liquid, etc.

Miscellaneous—

Ash and clinker disposal means. 49118, 49214, 49239, 51443.

FURNACES, ETC.—contd.

Miscellaneous—

Draught promoting devices. 48004.
Regulating the combustion of fuel.
49816.

Pulverised fuel combustion apparatus.
47405, 49822.

recuperators, *see* Regenerators, etc.

refractory linings for furnaces, *see*
CEMENT, ETC.

Refuse, consuming and destructor fur-
naces. No case.

Regenerators and regenerative fittings
for furnaces. 47157, 47821, 47827,
48550, 51058, 53118, 53148.

Retort furnaces (excepting coke-ovens).
49632.

Reverberatory, open hearth and like
furnaces.
48199, 50691.

Roasting and calcining and other wise
treating pulverulent and pasty mate-
rials, furnaces for (other than kilns,
reverberatory, rotary and shaft fur-
naces). No case.

Rotary furnaces and kilns.
46727, 46889, 47492, 51593.

Shaft and like furnaces (including blast
and cupola).
51861, 52505.

Smoke preventing and consuming.
No case.

stokers, mechanical, *see* Charging, etc.
Tilting and oscillating furnaces.
No case.

Furnace linings for high temperature work,
see CEMENT, ETC.

Furnaces, electric, *see* HEATING BY
ELECTRICITY, ETC.

FURNITURE. LXVI(4).

almirah, *see* Cabinets, etc.

blinds, venetian, *see* Window, etc.

blinds, window, *see* Window, etc.

Cabinets, wardrobes, book cases and
miscellaneous furniture and fittings.
47386, 48015, 48898, 49083, 50253,
51090, 52391, 52421, 52530, 52587,
53304.

FURNITURE, ETC.—contd.

Chairs, seats, bedsteads and like fur-
niture for sitting and lying upon.

47216, 47217, 47917, 48441, 48454,
48519, 48775, 48784, 50830, 52421,
52691, 52911, 53071.

curtain suspension devices, *see* Window,
etc.

curtains, *see* Upholstery, etc.

packing spring mattresses for storage
and transit, *see* PACKING, ETC.

roller blinds, *see* Window, etc.

rubber cushions, *see* Upholstery, etc.

seats, vehicle and like, *see* Chairs, etc.

support of pads, for cushions and
upholstery, *see* Upholstery, etc.

Tables, desks, and leaf-turners and
holders.

52421, 53107, 53328.

Upholstery, well furniture, screens and
looking glass. 46883, 46983, 46985,
47067, 51202, 51568, 51718, 52173,
52385, 52658, 52860.

Window, stair and like furniture, bra-
ckets, racks and stands.

47202, 47237, 48161, 48247, 48297,
48748, 49935, 50284, 50821, 51342,
52233, 52473, 52565, 52587.

Fused fabric assemblies, *see* PROOFING,
ETC.

Fuses, electric, *see* ELECTRIC COUPL-
INGS, ETC.

Fuses for blasting and mining, *see* AM-
MUNITION, ETC.

G

Galvanic cells, *see* BATTERIES, ETC.

**GAMES, TOYS AND AMUSEMENT
APPARATUS. XLII(4).**

Amusement, recreative and exercising
apparatus (other than games and
toys).

46481, 48259, 48287.

Balls for games.

46615, 46911, 48526, 49305, 52484,
52659.

Bats, clubs, rackets and like striking
appliances for games. No case.

GAMES, TOYS, ETC.—contd.

Indoor games (other than construction of bats and striking appliances).

49379, 49527, 50454.

Miscellaneous. No case.

Outdoor games (other than construction of bats and striking appliances, but including preparation of ground for).
No case.

Presses for rackets, tennis and like.
47453.

Racking games. No case.

strings for recquets and musical instruments, *see* ROPES, ETC.

Toys. 47319, 48054, 48213, 48246, 48330, 48431, 49042, 50111, 50680, 50899, 51800, 52063, 52484.

Garments, *see* DRESS, ETC.

Garments, pressing, *see* DRESS, ETC.

Gas discharge tube circuits, for wireless signalling, *see* WIRELESS, ETC.

Gas filters, *see* ZAIR, ETC.

Gas generators, internal combustion type, *see* INTERNAL COMBUSTION, ETC.

GAS MANUFACTURE (OTHER THAN BY GAS PRODUCERS AND RETORTS) AND DISTRIBUTIONS. XXXII(3).

(This heading includes the manufacture of combustible gaseous products for illuminating, heating and motive power purposes.)

Collection of gaseous or liquid by products. No case.

Gas enrichers (in which gas is not burned immediately), including enriching compositions. No case.

Gas holders. 46677.

hot gas producing by burning liquid fuel, *see* Production, etc.

humidifying air and gases, *see* Washing, etc.

Miscellaneous—

Combustible gaseous products.
47835.

Gas dispensing. 47830.

GAS MANUFACTURE, ETC.—contd.

Miscellaneous—

Gases, purifying other than by washing, scrubbing or treating with liquids and gases, 52875.

Production of permanent gas by dissolution or partial combustion of liquid fuel (excepting cracking).
52169, 53435.

Washing, scrubbing or otherwise treating gases with liquids. 47897, 48001, 48004, 50042, 51893, 51894, 52280, 52326, 52480, 52875.

Gas mixtures separating into fractions by liquefying, *see* AIR GASES, ETC.

Gas mixtures, separating into fractions other than by liquefaction, *see* CHEMICAL PROCESSES, ETC.

Gas producers, *see* COKING, ETC.

Gas ranges or rings, *see* STOVES, ETC.

Gas turbines, *see* TURBINES, ETC.

Gases apparatus for producing by wet method, *see* CHEMICAL PROCESSES, ETC.

Gases, contacting with liquids in fluidized bed, *see* CHEMICAL PROCESSES ETC.

Gases, cooling, *see* COOLING, ETC.

Gases, drying, *see* DRYING, ETC.

Gases, separating by liquefaction, *see* AIR, ETC.

Gases, separating by selective absorption, *see* CHEMICAL PROCESSES, ETC.

Gases, storing under pressure, *see* AIR, ETC.

Gases, washing, *see* GAS, ETC.

Gasification of coal-dust, *see* COKING.

Gaskets, sealing or packing, *see* STEAM ENGINES, ETC.

Gasoline, *see* OILS, ETC.

Gasoline, obtaining by cracking, *see* DISTILLING, ETC.

Gasoline or kerosine purifying, *see* OILS, ETC.

Gates, river, tide and flood controlling, *see* HYDRAULIC ENGINEERING, ETC.

GAUGES, MEASURES OF LENGTH AND TESTING APPARATUS. XLI(6).

46591, 47056, 47100, 47854, 48237, 48348, 48501, 49609, 49750, 50245, 50574, 50630, 51121, 51191, 51364, 51913, 53428.

Gear, pumps, *see* ROTARY ENGINES, ETC.

Gear wheels, *see* MECHANISM, MISCELLANEOUS.

Gearing, mechanical, *see* MECHANICAL MISCELLANEOUS.

Gearing toothed and fiction, *see* MECHANISM, ETC.

Gearing, variable, speed, *see* MECHANISM MISCELLANEOUS.

Gears epicyclic, *see* MECHANISM MISCELLANEOUS.

Gelatine and glue, *see* ADHESIVE, ETC.

Gels, *see* CHEMICAL PROCESSES, ETC.

Gems, *see* JEWELLERY,

Gems, optical, *see* PHILOSOPHICAL, ETC.

Generators, electric, *see* DYNAMO ELECTRIC, ETC.

Genins, *see* CARBON COMPOUNDS, ETC.

Geophysical exploration by electric and magnetic means, *see* MEASURING, ETC.

Germanium oxide, *see* CHEMICAL COMPOUNDS, ETC.

Germicidal soaps, *see* DISINFECTING, ETC.

Gettering and regulating gaseous pressure in discharge tube, *see* VACUUM, ETC.

Girders and beams, *see* BUILDING, ETC.

Glass blocks and tiles for buildings, *see* BRICKS, ETC.

Glass, silvering, *see* TINNING, ETC.

Glass, grinding and polishing, *see* POLISHING, ETC.

GLASS MANUFACTURE. XXXVI.

Annealing tempering and toughening glass. 47133, 51216, 52526, 53333.

bending glass, *see* Miscellaneous.

Blowing hollow-ware.

No case.

Cathode ray tube envelops, making, *see* Glassware, etc.

Compound or laminated glass sheets. 50714, 51122, 52935.

Cutting or dividing.

48402, 48582, 52610, 52611, 52612, 52614.

Delivering and gathering molten metal.

No case.

GLASS MANUFACTURE, ETC.—*contd.*

Drawing and extruding.

47449, 48915, 49660, 51568, 53076, 53289.

Enamels and enamelling, vitreous.

46913, 48815, 49425, 49555, 49837, 52111.

gems, silvering, *see* TINNING, ETC.

glass beads, *see* Glassware, etc.

glass fibres coated with metal or metal alloy, *see* Miscellaneous.

glass fibres, coating on sheets, *see* Miscellaneous.

glass fibres making *see* Miscellaneous.

glass insulators, forming cavities in, *see* Cutting, etc.

glass sheets bending *see* Miscellaneous.

Glass surfaces, coating with chemicals to produce light diffusing layers, *see* Miscellaneous.

Glassware forming by miscellaneous processes.

49599, 51654, 52524, 52694.

Miscellaneous—

Applying light diffusing layers on glass surfaces. 52175.

Bending apparatus. 53371.

Bending glass sheets. 47678, 50286, 51216, 52226, 52777, 52928, 53298, 53299, 53332, 53333, 53370.

Bending glass fibres. 52609.

Calibrating glass bulbs for electric discharge tubes. 46591.

Coating sheets with glass fibres. 51148.

Foam glass. 49524.

Glass fibres, making. 51616, 51618.

Light diffusing layers, applying to surfaces. 52205.

Metal coated glass fibres and filaments. 49487, 50591.

Opaque glass ribbons. 47449.

Sealing off glass tubes. 48597.

sealing off glass tubes, *see* Miscellaneous.

Moulding and casting (other than blowing).

47663, 51122, 52525.

ornamental glass, production of by moulding, *see* MOULDING, ETC.

GLASS MANUFACTURE ETC.—concl'd.

- polishing and grinding glass, *see* POLISHING, ETC.
- Production and purifications of metal. 51462, 51847.
- sealing glass layers together, *see* Compound, etc.
- tempering, *see* Annealing, etc.
- transferring or conveying glassware, means for, *see* LIFTING, ETC.
- uniting glass to metals and vitreous materials, *see* UNITING METAL, ETC.
- vacuum vessels, sealing off exhaust tubes of, *see* Miscellaneous.
- Glauber's salt, *see* CHEMICAL COMPOUNDS, ETC.
- Globulin preparations, *see* DISINFECTING, ETC.
- Gloss measuring device, electric, *see* MEASURING, ETC.
- Gloss meter, electric, *see* MEASURING, ETC.
- Glow discharge devices, electric, *see* VACUUM, ETC.
- Glue, *see* ADHESIVE, ETC.
- Glycerol, *see* CARBON COMPOUNDS, ETC.
- Glycin amide, *see* CARBON COMPOUNDS, ETC.
- Glycosides, *see* CARBON COMPOUNDS, ETC.
- Golf balls, *see* GAMES, ETC.

GOVERNORS, SPEED-REGULATING FOR ENGINES AND MACHINERY. XLIV(2).

46563, 46960, 49175, 49873, 51883, 52636.

GRAIN AND SEEDS, TREATMENT OF (INCLUDING TREATMENT & PRODUCTION OF FLOURS AND MEALS). 1(3).

(This heading includes the treatment in bulk of single stone fruits and nuts for the removal of pericarp methods and apparatus not resulting in such modification are indexed under various headings for the processes such as DISINFECTING, ETC.; FOOD, ETC.; SIFTING, ETC.).

- brightening flours, *see* Production, etc.
- corn grinding mills, *see* GRINDING, ETC.

GRAIN AND SEEDS, ETC.—cont'd.

- corn silos, *see* BUILDINGS, ETC.
- Damping with and otherwise applying water and other liquids. 47457, 49313, 49314, 50079, 51973, 52645.
- dough testing apparatus, *see* Sampling, etc.
- Flattening by mechanical means. 52645.
- Hulling, husking, and decorticating mechanically. 47310, 47560, 47770, 48549, 49226.
- milling or grinding grain to produce flour, *see* GRINDING, ETC.
- Miscellaneous—
- Coating creals with whitening agents. 50079.
- Decorticating seeds and nuts otherwise than mechanically. 52788.
- Heating tamarind seeds with salts. 49313.
- Silos. 50053.
- nuts and seeds heating by electric or electro magnetizing fields, *see* Treating, etc.
- Production and treatment of flour and meal (including processes of mechanical reduction other than treating by air, gases and liquids). 47193, 47380, 47458.
- Roasting grains, cereals and like granular food products. 48164, 49838, 53319.
- Sampling granular materials. No case.
- Scouring and polishing. 51159.
- silos, *see* Miscellaneous.
- silos for storing grains and the like, *see* BUILDING, ETC.
- storage bins for grains and the like, *see* BUILDINGS, ETC.
- tamarind seeds, treating with salts, *see* Miscellaneous.
- Threshing appliances. 47881, 51089.
- Treating by air, gases or vapours (including steaming and heating indirectly). 50200, 51973, 52645, 52788.
- Graneries, *see* BUILDING, ETC.

GRANULATING FUSIBLE MATERIALS.
XXXIII(4).

50471.

Granulators for urea, *see* GRANULATING, ETC.

Grass cutting and beating devices, *see* AGRICULTURAL, ETC.

Grates, furnace, *see* FURNACES, ETC.

Gratings cleaning devices for hydraulic installations, *see* HYDRAULIC ENGINEERING, ETC.

Greatings for conduits, *see* DRAINS, ETC.

Grease guns, *see* LUBRICATING.

Grease injectors, *see* LUBRICATING.

Greases, *see* OILS, ETC.

Grids for electric accumulators, *see* BATTERIES, ETC.

Grinding, polishing and abrading, excepting compositions, *see* POLISHING, ETC.

GRINDING, CRUSHING, PULVERISING AND LIKE DISINTEGRATING.
XXXIV(2).

(This heading does not include Agricultural implements, (AGRICULTURE); Greater and crumblers (COOKING); Hulling, husking and decorticating grains (GRAIN, ETC.); Rag engines (PAPER); Preparation of fibres for spinning (SPINNING); Cutting and breaking tea (TEA MANUFACTURE); Thrashing machines (GRAIN AND SEEDS, ETC.).

Ball and tube mills.

46707, 46708, 49789, 50739, 51863, 51923.

Conical and like mills.

48531.

cracking nuts by impact, *see* Miscellaneous, etc.

Disc and like mills (stone mills).

47550, 48206, 50858, 51146.

Edge-runners and pans and like mills.

No case.

feeding devices for granular and like materials, *see* Miscellaneous, etc.

Grinding and breaking by direct percussion (including stamps for ores and pestless and mortars.)

48952, 49373, 50557, 51279.

GRINDING, CRUSHING, ETC.—*contd.*

hopper for delivering into or discharging powdery or granular materials from mills, *see* Miscellaneous, etc.

Impact pulverisers.

46506, 52311, 52742.

jaw crusher for stones, *see* rinding, etc.

Miscellaneous types of mills and details.

Cracking nuts. 47560, 47770.

Feeding devices for granular and like materials.

46707, 46708, 46873, 50052.

Slitting straw lengthwise. 52385.

Wet-grinding. 48327.

pulverising carbonaceous materials with gas streams in heating zones, *see* COKING, ETC.

Roller mills other than sugarcane mills.

47708, 48563, 48564, 48629, 51089, 51582.

separating and classifying devices for ground and crushed products, *see* SIFTING, ETC.

stone mills, disc and like *see* Disc, etc.

Sugarcane mills.

47814, 49726, 49953, 51437.

wet grinding, *see* Miscellaneous, etc.

Grinding wheels, *see* POLISHING, ETC.

Grit blasting, *see* POLISHING, ETC.

Growth factors or vitamins, *see* CARBON COMPOUNDS, ETC.

Growth factors, producing by fermentation processes, *see* DISINFECTING, ETC.

Guinidine sulphamate, *see* CARBON COMPOUNDS, ETC.

Guns, *see* SMALL ARMS.

Guns, cement, *see* BUILDING, ETC.

Guns for shooting dowels and bolts into masoury and other supports, *see* SMALL ARMS, ETC.

Guns, grease, *see* LUBRICATING.

Guns, mounting for, *see* SMALL ARMS, ETC.

Guts (catguts), *see* ROPES, ETC.

Gyro-tops, *see* GAMES, ETC.

GLASS MANUFACTURE, ETC.—concl'd.

Hair clipping or cutting device, barbers and like *see* CUTLERY.

Hair combs, *see* TOILET, ETC.

Hair cutting appliances, other than clippers, razors and scissors, *see* TOILET, ETC.

Hair drying appliances, *see* TOILET, ETC.

Half-tone printing blocks, producing, *see* PHOTOGRAPHY.

Halides metallic. *see* CHEMICAL COMPOUNDS, ETC.

Halo-aliphatic thiono-phosphates, *see* CARBON, ETC.

Halogen pyridazines, *see* CARBON COMPOUNDS, ETC.

Hand rails, *see* FENCING, ETC.

HAND TOOLS. XLIII(2).

(This heading does not include Boring and Drilling tools.)

Box openers, crow-bars and like prizing tools.

No case.

Chisels and gouges. 51801.

cork-screws, *see* STOPPERING, ETC.

Cramps and clamps and vices. 47363, 53329.

drills, metal and wood cutting, *see* METAL WORKING.

Extracting and removing nails, tacks, rivets, keys, cotters, collars, hand-tools for. 47705.

Files and rasps.

47210, 47211, 50156, 52475, 52910.

Handles for hand-tools, including those for brushes, cutlery, mop and the like. 49136.

Mallets and hammers. No case.

Miscellaneous—

Wire tensioning apparatus. 49525.

Pliers, cutters, pincers and tongs 53349.

Screw drivers. No case.

sheaths for handles of hand tools, *see* Handles, etc.

Spanners and wrenches.

49638, 49929, 50084, 50677, 51913, 52470.

tongs, *see* Pliers, etc.

HAND TOOLS.—cont'd.

tools for removing tyres and ring from wheels and refitting, *see* WHEELS, ETC.

Handle for sweeping brushes, *see* BRUSHING, ETC.

Harmonic elimination equipment for commercial electric supplies, *see* TELEGRAPHS, ETC.

HARNESS, SADDLERY AND HORSE SHOES. XXIV(2).

No case.

Harvesting machines, *see* AGRICULTURAL, ETC.

Hats and head coverings, *see* DRESS, ETC.

Heat exchangers, *see* HEATING SYSTEMS.

Heat exchangers for turbines arrangement and disposition of *see* TURBINES, ETC.

Heat insulating bricks, *see* HEATING SYSTEMS, ETC.

Heat pumps, *see* HEATING SYSTEMS, ETC.

Heat treatment of alloys, *see* ANNEALING, ETC.

HEATING BY ELECTRICITY. LIX(2).

Arc furnaces.

46889, 47600, 49571, 50637, 52080, 52081, 52184, 53337.

de-icing resistance heaters *see* Resistance, etc.

dielectric heating devices, *see* Miscellaneous.

electric irons, *see* Hot plates, etc.

electric resistance heaters, *see* Resistance, etc.

Electrodes for electric furnaces.

46741, 46784, 47203, 49987, 50420, 52184, 53286, 53318, 53337.

Heaters for liquids and accessories therefor.

46819, 47903, 48437, 51345, 52758.

holders for flexible cable of domestic irons, *see* CONDUCTORS, ETC.

Hot plates, boiling rings, and like appliances (other than adapted for use as radiators).

46547, 46950, 47114, 48618, 49886, 49887, 49965, 50270, 51029, 52314.

HEATING BY ELECTRICITY.—*contd.*

Induction furnaces and ovens and other furnaces not classified.

No case.

irons, *see* Hot plates, etc.

lighters for cigarettes and the like employing resistances, *see* Resistance, etc.

Miscellaneous—

High frequency dielectric heating apparatus. 47910.

Radiators, imitation fires, and stoves for heating buildings or vehicles.

47481, 48053, 48618, 52135, 52948.

resistance elements for electric heaters *see* CAPACITANCE, ETC.

Resistance furnaces (the resistances forming parts of the furnace or oven). 46550, 47496, 48387, 50072, 50078, 50257, 50815, 53393.

resistances for heaters, construction of, *see* CAPACITANCES, ETC.

smoothing irons, thermostats for controlling *see* HEATING SYSTEMS, ETC.

steam cooking apparatus, electric heating arrangements for, *see* Heater for liquids, etc.

stoves, electric, *see* Hot plates, etc.

HEATING SYSTEMS AND APPARATUS (OTHER THAN FURNACES AND STOVES). VII(2).

(Heating processes and apparatus applicable to BURNERS; FURNACES; STEAM GENERATORS; STEAM SUPERHEATERS; STOVES are excluded from this heading.)

Buildings, ships and vehicles, systems for heating. 50125, 50511.

Disgesters (closed heaters in which substances are disintegrated with liquids). 48691, 51241.

Feed-water for hot-water boilers and steam generators, heating. 47246, 51728, 51750.

heat and sound proof insulating material, *see* Non-conducting, etc.

heat exchangers, *see* Surface, etc.

heat exchangers mounting and arranging in turbines, *see* TURBINES, ETC.

heat insulating bricks. *see* Non-conducting, etc.

HEATING SYSTEMS AND, ETC.—*contd.*

Liquids and gases, heating (other than feed-water heaters; and apparatus involving structural modifications of furnaces and stoves).

50303, 51340, 51345, 52949, 53205.

mirrors for concentrating solar energy, *see* PHILOSOPHICAL, ETC.

Miscellaneous heating systems—

Heat recovering from waste gases. 51728.

Heat storing unit. 53174.

Heating arrangements for cooking units. 51125.

Heating spinneret headings. 46461.

Waste heat from refrigerators utilizing. 53205.

Non-conducting coverings for heat and sound (including fire proof coverings and linings).

46561, 48275, 48667, 48855, 49038, 49394, 50217.

regenerators heat-exchanging, *see* Surface apparatus, etc.

rooms, heating of, *see* Buildings, etc.

spinneret heads, heating, *see* Miscellaneous.

solar heaters, *see* Utilising, etc.

Surface apparatus for effecting transfer of heat (other than apparatus in which heat is transferred from products of combustion).

(Adaptation and arrangements of surface apparatus for special purposes are indexed only under separate headings, such as COOLING, ETC.; DISTILLING, ETC.; STEAM GENERATORS; STEAM SUPERHEATERS; FURNACES, ETC.)

(Apparatus for effecting transfer of heat from products of combustion are indexed only under STEAM GENERATORS or STEAM SUPERHEATERS)

46528, 47140, 47274, 47767, 47768, 47908, 48044, 48110, 48381, 48474, 48491, 48592, 48593, 48594, 48863, 49017, 49069, 49437, 49438, 49669, 49709, 50116, 50303, 50511, 50766, 51144, 51193, 51321, 51942, 52480, 52586, 53314.

temperature and regulating arrangements for electric furnaces and ovens, *see* HEATING BY ELECTRICITY.

HEATING SYSTEMS AND, ETC.—concl'd.

- temperature controlling systems, *see* Thermostats, etc.
- thermal regenerators, *see* Surface, etc.
- Thermostats and like apparatus for regulating temperature.
47114, 51876, 52055, 52949.
- Utilising for heating and power purposes solar and natural heat.
46981, 47231, 47407, 49396, 49814, 53369.
- valves for thermostat controlled boilers, *see* VALVE, ETC.
- water and other liquid heaters other than boiler feed water heaters, *see* Liquids, etc.
- Hectographic paper, *see* TYPEWRITERS.
- Heddle frames, *see* LOOMS.
- Hedge cutting machines, *see* AGRICULTURAL, ETC.
- Helicopters, *see* AERONAUTICS.
- Helmets, *see* DRESS, ETC.
- Herbicide Compositions, *see* DISINFECTING, ETC.
- Hessian or jute cloth, bleaching, *see* DYEING, ETC.
- Heterocyclic organic compounds, *see* CARBON COMPOUNDS, ETC.
- Hexamethylene tetramine, *see* CARBON COMPOUNDS, ETC.
- Hexylresorcinol esters, *see* CARBON COMPOUNDS, ETC.
- Hides and skins compacting, *see* LEATHER.
- Hides and skins, dehairing, *see* LEATHER.
- Hides and skins, staking *see* LEATHER.
- High frequency coils, *see* CAPACITANCES, ETC.
- High frequency di-electric heating devices *see* HEATING BY ELECTRICITY, ETC.
- High frequency electric wireless signalling systems, *see* WIRELESS, ETC.
- Hinges, *see* DOOR AND GATE, ETC.
- Hoes, *see* AGRICULTURAL, ETC.
- Hoisting apparatus, *see* LIFTING, ETC.
- Holdalls, *see* BAGS, ETC.

HOLLOW-WARE. XL(4).

- (*Excepting bottles for storing air and gases under pressure (AIR AND GASES) bed pans (CLOSETS; BOTTLES, ETC.) cold and heat retaining vessels (COOLING); cract and like receptacles and drinking vessels and other table articles (TABLE ARTICLES); tea and like infusions making apparatus for (DECOCTIONS) and washhand basins (CLOSETS).*)
- Buckets, pails, baking, heating cooking and like vessels metallic.
48022, 48024, 48124, 48804, 48812, 49333, 50626, 53146.
- bungs and bushes for bungholes, *see* STOPPERING, ETC.
- can sealing composition containing India rubber, *see* INDIA RUBBER, ETC.
- Cans and boxes, opening by cutting or tearing.
47037, 52150.
- carton, paper or cardboard, *see* Tubes or containers, etc.
- Casks and barrels.
46898, 48700, 51751, 52299, 53126.
- collapsible containers, *see* Tubes, etc.
- containers for spraying equipment, *see* Miscellaneous.
- containers made of fibrous materials, *see* Non-metallic, etc.
- dispensing containers, *see* STOPPERING, ETC.
- filling casks and like vessels with liquids, *see* STOPPERING, ETC.
- Lids and covers not forming tight joint with receptacles.
47889, 53126.
- lids forming tight joint with receptacles, *see* STOPPERING, ETC.
- Miscellaneous—
- Container for wool-ball. 47889.
- Containers for sprayers. 50038, 50789.
- Detecting leakage in containers. 48035.
- Tank for transporting liquids and solids. 51480.
- Non-metallic vessels, other than casks and barrels.
47987, 48148, 50000, 51044, 51720, 53106, 53405.

HOLLOW-WARE.—*contd.*

screwplug stoppers and closure flanges for casks, barrels and like containers, *see* STOPPERING, ETC.

Spouts. No case.

tin openers, *see* Cans and boxes, etc.

Tubes or containers, collapsible.

46667, 47973, 48401, 49143, 49255, 49342, 49861, 50013, 51553, 52886.

Hoppers for grinding and crushing mills, *see* GRINDING, ETC.

Hormones, *see* DISINFECTING, ETC.

Horns bag and like, *see* BELLS, ETC.

Hose and like connections, *see* PIPE JOINTS, ETC.

Hose couplings, *see* PIPE-JOINTS, ETC.

Hose pipe couplings and connection, *see* PIPE-JOINTS, ETC.

Hose reels, *see* PIPES AND TUBES.

Hose sprinklers, *see* SPRAY, ETC.

Hoses and other flexible pipes, *see* PIPES AND TUBES, ETC.

Hoses, woven fabrics for making *see* FABRICS WOVEN.

Hosiery, *see* KNITTING, ETC.

HOT-AIR AND COMPRESSED-AIR ENGINES. XLVI(1).

47157, 47357, 47448, 47810, 47908, 48042, 49784, 50103, 51058, 52174, 52491, 52499, 53089.

cold-gas refrigerators, *see* COOLING, ETC.

cold-gas refrigerators or hot-gas engines operated on reversed cycle, *see* COOLING, ETC.

Hubs for wheels, *see* WHEELS, ETC.

Humidifying air and gases, *see* GAS MANUFACTURE, ETC.

Hurricane lamps, *see* LAMPS FOR LIGHTING, ETC.

Husking machines, *see* GRAIN AND SEEDS, ETC.

Hydraulic classifiers, *see* WASHING GRANULAR, ETC.

Hydraulic control valves, *see* VALVES, ETC.

HYDRAULIC ENGINEERING, MISCELLANEOUS. XXVIII(2).

(*This heading includes subaqueous buildings, canals, flow meters, siphons, sluice gates and the like.*)

Booms and like defences for coasts, harbours and rivers.

51424, 52371.

Buildings, and structures, sub-aqueous.

46719, 46885, 48210, 48281, 49323, 49468, 50989, 51424, 51911, 52607, 52815, 53136.

canals gate operating mechanism, *see* Sluice-gates.

Canals and rivers.

No case.

damming walls for weir closures, sluice gates and the like, *see* Buildings, etc.

dikes or jetties, *see* Buildings, etc.

floating docks, *see* Miscellaneous.

Fountains, hydrants, standpipes and water cranes.

No case.

gates, flood, river tide or like controlling, *see* Sluice gates.

grating cleaning devices for hydraulic installations, *see* Miscellaneous.

hydraulic gates, *see* Sluice-gates.

hydraulic turbine installations, *see* Buildings, etc.

Liquid meters and venturi, pitot-tube and other velocity measuring apparatus.

53092 53265.

marine platform structures, *see* Buildings, etc.

Miscellaneous—

Discharge regulators. 53093

Docks. 53194.

Floating docks. 48281.

Grating cleaning devices, 46961, 48717.

pitching for defence of banks, beaches and shores, *see* Booms, etc.

seals or water stops for joints in sub-aqueous structures, *see* Buildings, etc.

Siphons. No case.

sliding gates for hydraulic installations *see* Sluice-gates.

HYDRAULIC ENGINEERING, ETC.
—*contd.*

Sluice-gates.

48231, 48806, 49142, 49575, 50268,
50260, 51755, 52246, 52628, 53194,
53290.spray producers, *see* SPRAY PRODUCERS.weirs, *see* Buildings, etc.Hydraulic giants, *see* EXCAVATING.Hydraulic hammer or ram operated liquid raising or forcing devices, *see* WATER, ETC., RAISING, ETC.Hydraulic jacks, *see* LIFTING, ETC.Hydraulic mining and scouring apparatus, *see* EXCAVATING.**HYDRAULIC PRESSES, METERS, MOTORS, AND LIKE APPARATUS FOR USE WITH HIGH PRESSURE. XXIX(1).**by-pass valves for presses, *see* VALVES, ETC.control valves for hydraulic presses, *see* VALVES, ETC.distributors for pressure fluid in remote control systems, *see* Machines, etc.fluid pressure operated remote control devices, *see* Machines, etc.fluid pressure power transmission device *see* Hydraulic, etc.fluids for hydraulic transmission apparatus, *see* Hydraulic transmission, etc.hydraulic clutches with mechanically interengaging parts, *see* MECHANISM MISC.hydraulic control valves, *see* VALVES, ETC.hydraulic engines, *see* Liquid pressure, etc.hydraulic feed for cable-tool drills, *see* Machines and apparatus miscellaneous.hydraulic jack systems, *see* Machines, etc.

Hydraulic presses (including steam and other fluid pressure presses and hammers).

48464, 50059, 51278, 52077, 52816, 53252.

hydraulic pressure relief valves, *see* VALVES, ETC.**HYDRAULIC PRESSES, ETC.—*contd.***hydraulic roof support for mines, *see* MINING, ETC.hydraulic shock absorbers for vehicles, *see* SPRINGS, ETC.hydraulic thrusters, *see* Hydraulic transmission, etc.

Hydraulic transmission of power.

48464, 49961, 50025, 50059, 50568, 51607, 52043, 52077, 52349, 53288.

impellers and other vaned elements for torque converters or transmitting devices making, *see* METAL WORKING.jacks, *see* LIFTING, ETC.liquid meters, pressure operated, *see* Liquid pressure, etc.liquid pressure actuated by-pass valves for hydraulic systems, *see* VALVES, ETC.

Liquid pressure engines and liquid meters.

47898, 49907, 50103, 52491, 52499.

Machines and apparatus, miscellaneous.

46925, 47809, 47810, 48087, 48685, 49784, 50499, 50971, 52174, 52591.

master cylinders for hydraulic pressure systems, *see* Hydraulic transmission, etc.mould core stripping apparatus, *see* Machine, etc.pumping systems, automatic electric control arrangements for, *see* ELECTRIC SIGNALLING, ETC.reciprocating pumps for liquid pressure control systems, *see* PUMPS, ETC.relief and other control valves for hydraulic systems, *see* VALVES, ETC.servo-control and servo-actuated valves for hydraulic systems, *see* VALVES, ETC.servo-motor control systems, *see* Machines, etc.thrusters or thrushing devices, *see* Hydraulic transmission, etc.torque converters and other torque transmitting devices, *see* Hydraulic transmission, etc.valves for hydraulic presses, *see* VALVES, ETC.Hydraulic presses, valves for, *see* VALVES, ETC.

- Hydraulic reciprocating pumps, *see* PUMPS, ETC.
- Hydraulic relief valves, *see* VALVES, ETC.
- Hydraulic shock absorbers, *see* SPRINGS, ETC.
- Hydraulic transmission of power, *see* HYDRAULIC PRESSES, ETC.
- Hydraulic turbines, *see* TURBINES, ETC.
- Hydraulic turbines installation, *see* HYDRAULIC ENGINEERING, ETC.
- Hydrazines, *see* CARBON COMPOUNDS, ETC.
- Hydrocarbon oils, cracking, *see* DISTILLING, ETC.
- Hydrocarbon oils extracting, *see* OILS, ETC.
- Hydrocarbons, *see* CARBON, ETC.
- Hydrocarbons, coking, *see* DISTILLING, ETC.
- Hydrocarbon conversion apparatus catalytic, *see* CHEMICAL PROCESSES, ETC.
- Hydrocarbons cracking and converting into lighter fractions, *see* DISTILLING, ETC.
- Hydrocarbons, dehydrogenating, *see* CARBON, ETC.
- Hydrocarbons, detractive hydrogenation of, *see* DISTILLING, ETC.
- Hydrochloric acid, *see* CHEMICAL COMPOUNDS, ETC.
- Hydrocinnolones, *see* CARBON COMPOUNDS, ETC.
- Hydrocracking of hydrocarbons, *see* DISTILLING, ETC.
- Hydrocyanic acid, *see* CHEMICAL COMPOUNDS, ETC.
- Hydroforming or reforming of hydrocarbons, *see* CARBON COMPOUNDS, ETC.
- Hydroforming or reforming of hydrocarbons, catalysts for, *see* CHEMICAL COMPOUNDS, ETC.
- Hydrogen, *see* NON-METALLIC, ETC.
- Hydrogen cyanide, *see* CHEMICAL COMPOUNDS, ETC.
- Hydrogen peroxide, *see* CHEMICAL COMPOUNDS, ETC.
- Hydrogen sulphide, *see* CHEMICAL COMPOUNDS, ETC.
- Hydrogenation of carbon monoxide, *see* CHEMICAL COMPOUNDS, ETC.
- Hydrogenation of carbon monoxide, catalysts for, *see* CHEMICAL PROCESSES, ETC.
- Hydrogenation of mineral oils, *see* DISTILLING, ETC.
- Hydrolysis of cellulose acetate film, *see* CELLULOSE, ETC.
- Hydroperoxides organic, *see* CARBON COMPOUNDS, ETC.
- Hydrosulphites, metallic, *see* CHEMICAL COMPOUNDS, ETC.
- Hygrometers, *see* PHILOSOPHICAL, ETC.
- I**
- Ice candy, making, *see* COOLING, ETC.
- Ice colours developing on textile fabrics, *see* DYEING, ETC.
- Ice making, *see* COOLING, ETC.
- Identification or selective equipment for automatic telephone exchanges, *see* TELEPHONES, ETC.
- Igniting devices for explosive charges, *see* AMMUNITION, ETC.
- Igniting systems for internal combustion engines, *see* INTERNAL, ETC.
- Ignition circuit for electric discharge devices, *see* ELECTRIC SUPPLY, ETC.
- Ignition devices for explosive charges, *see* AMMUNITION, ETC.
- Image intensifying tubes, electric, *see* VACUUM, ETC.
- Imbibition printing of cinematographic and other films, *see* PRINTING.
- Imidazole and its derivatives, *see* CARBON COMPOUNDS ETC.
- Imidazoline, *see* CARBON, ETC.
- Impedance matching of wireless aerials, *see* WIRELESS, ETC.
- Impedance networks, electric, *see* TELEGRAPHS, ETC.
- Impedance transformers, *see* TELEGRAPHS, ETC.
- Impregnating compositions for water and fire proofing, *see* PROOFING, ETC.
- Impregnating compounds for insulating cables, *see* CONDUCTORS, ETC.
- Impulse generating circuits, *see* WIRELESS, ETC.
- Impulse turbines, *see* TURBINES, ETC.

Incandescent lamps, burners for, *see* BURNERS, ETC.

Incondescent lamps, electric, *see* ELECTRIC, LAMPS, ETC.

Incandescent lamps, control devices for, *see* BURNERS, ETC.

Incandescent lamp mantles, *see* BURNERS, ETC.

INCRUSTATION AND CORROSION OF METALLIC SURFACES—PREVENTING AND REMOVING. XLV(1).

48419, 49036, 49315, 49437, 49562, 49582, 49696, 50002, 50885, 50892, 50979, 51113, 51170, 51515, 51536, 52046, 52597, 52808.

Incubators, *see* ANIMALS, ETC.

Indane and derivatives thereof, *see* CARBON COMPOUNDS, ETC.

Indazoles, *see* CARBON COMPOUNDS, ETC.

Index files, *see* FILING, ETC.

India rubber compositions, moulding, *see* MOULDING, ETC.

INDIA RUBBER, GUTTA-PERCHA, MICA AND LIKE MATERIALS OF CONSTRUCTIVE UTILITY. XII(1).

artificial boards, *see* Miscellaneous.

bladders and like hollow inflatable rubber articles making, *see* MOULDING, ETC.

boards, artificial, *see* Miscellaneous.

bonding rubber to metal, *see* Colouring etc.

Coagulating and otherwise separating from latex. 53150.

Colouring, ornamenting, variegating and metallizing. 46683, 48479, 50140, 50189, 50703.

Curing and treatment of latex before and after coagulation. 50170, 52170.

Devulcanising and utilising waste.

No case.

Embedded wires, fibres and the like. 47414.

foam rubber, *see* Rubber rendering, etc.

India rubber compositions.

46856, 46872, 46939, 46962, 47070, 47143, 47554, 47933, 48449, 48623, 48649, 49022, 49078, 49309, 50648, 50651, 50818, 51063, 51119, 51120, 51265, 51266, 51431, 51432, 51917, 52014, 52170, 52253, 52364, 52952.

INDIA RUBBER, ETC.—contd.

Latex, collecting and extracting from plants.

No case.

Machines for creping, calendering, washing, purifying, rolling, and mechanical extraction from plants.

No case.

metal bonding to rubber, *see* Colouring, etc.

Mica and other naturally occurring materials of constructive utility. 47843.

Miscellaneous—

Artificial boards. 46934, 47411, 47412, 49423, 49578, 50583, 50619, 51179, 51765, 51940.

Crepe rubber making. 46939.

Preserving natural rubber. 50651.

Repair patches. 50679, 52637.

Rubber antioxidants. 48623, 50321.

Softening rubber. 46584.

Subjecting rubber article to heat treatment under stress. 49192.

Surface properties modifying. 46911.

pictorial like matters, applying to rubber surfaces, *see* Colouring, etc.

preserving natural rubber, *see* Miscellaneous.

preserving synthetic rubber, *see* Substitutes, etc.

puncture-sealing compositions containing rubber, *see* India rubber, etc.

reinforcing rubber by compounding, *see* India rubber, etc.

rubber antioxidants, *see* Miscellaneous.

rubber cellular bodies, to prevent or reduce shrinkage of, *see* Rubber rendering, etc.

rubber compositions, for sealing of punctures, *see* India rubber, etc.

Rubber, rendering porous, spongy or powder.

46627, 47498, 48690, 49110, 49310, 49339, 49849, 49985, 50073, 51511, 51718, 51722, 51837, 52173, 52736, 52843.

rubberised fabrics, *see* PROOFING, ETC.

Seaming and otherwise joining.

No case.

INDIA RUBBER, ETC.—concl'd.

Seaweed and like marine products, treating.

No case.

Sheets, threads, tapes, rods, rollers, cylinders and tubes making.

48478, 48690, 50946, 50986, 51315.

sponge rubber, *see* Rubber rendering, etc.

Substitutes for rubber, 46856, 50651.

valve base compositions containing rubber, *see* India rubber, etc.

Vulcanising. 46845, 46872, 47530, 47933, 49339, 49743, 51315, 52048.

INDICATING, RECORDING AND REGISTERING APPARATUS, MISCELLANEOUS. XLI(7).

(This heading includes the terminal elements of measuring-instruments whereby an indication at the moment is furnished, a permanent record is made, or a totalising is effected by integration, Dials, knobs, handles scales and other graduated and reading elements for manually adjusting and setting the parts of measuring instruments and other apparatus, of which the reading-elements are not of interest as indicating means in general, are indexed under separate headings for the apparatus.)

Calendars and date indicators.

50828.

Indicating. 46501, 46724, 47796, 48041, 49087, 49981, 51306, 52109.

markings on films, apparatus for applying, *see* Recording etc.

Miscellaneous—

Marking wound bobbins. 51067.

Recording and registering.

49087, 50507. 52093.

Indolines, *see* CARBON COMPOUNDS, ETC.

Indoor games, *see* GAMES, ETC.

Induced current brakes, *see* BRAKES, ETC.

Inductances, *see* CAPACITANCES, ETC.

Induction motors, *see* DYNAMO-ELECTRIC, ETC.

Inertia starters for internal combustion engines, *see* INTERNAL, ETC.

Infant food *see* FOOD, ETC.

Inflation valves for pneumatic tyres, *see* VALVES, ETC.

Infra-red radiations, means for electrically measuring, *see* MEASURING, ETC.

Infra-red spectroscopes, *see* PHILOSOPHICAL, ETC.

Ingots, conveying, *see* LIFTING LOADING, ETC.

Ingots, casting, *see* CASTING, ETC.

Initiating compositions, explosive, *see* EXPLOSIVES, ETC.

Injection moulding machines, *see* MOULDING, ETC.

INJECTORS AND EJECTORS. XLVII(2).

47434, 49008, 50653.

ejectors in vacuum brakes, *see* BRAKES, ETC.

Injectors for lubricating systems, *see* LUBRICATING, ETC.

Ink pots, *see* WRITING, ETC.

Inkers for printing presses, *see* PRINTING, ETC.

Inks, *see* WRITING, ETC.

Insect deflector attachments for motor cars and other vehicles, *see* ROAD VEHICLES.

Insect repellent compositions, *see* DISINFECTING, ETC.

Insecticidal compositions, *see* DISINFECTING, ETC.

Insecticides, device for introducing in soil, *see* AGRICULTURAL, ETC.

Insulating cables, *see* CONDUCTORS, ETC.

Insulating coverage extruding on electric cable conductors, *see* MOULDING, ETC.

Insulating electric conductors, *see* CONDUCTORS, ETC.

Insulating enamels, *see* PAINTS, ETC.

Insulating materials, electric, *see* CONDUCTORS, ETC.

Insulating or heat non-conducting coverings, *see* HEATING SYSTEMS, ETC.

Insulating shells sawing off from plates or blocks, *see* WOOD CUTTING, ETC.

Insulators, electric, (including means for securing insulating together or to supports), *see* CONDUCTORS, ETC.

Insulin, *see* DISINFECTING, ETC.

Intaglio printing moulds, *see* PHOTOGRAPHY.

Intelligence signal storing systems, *see* ELECTRIC SIGNALLING, ETC.

Intelligence storage devices, in telephone exchanges, *see* TELEPHONES, ETC.

Interlocking apparatus, railway, signal, *see* RAILWAY SIGNALS, ETC.

INTERNAL COMBUSTION ENGINES. XLVI(2).

(This heading includes features specially designed and adapted for internal combustion engines. Construction of engine details and accessories of interest apart from internal combustion engines are indexed under such headings as BRAKES; FILTERING; LUBRICATING; MECHANISM; MISCELLANEOUS; STEAM ENGINES; VALVES; ETC.).

air inlet ports and channels, *see* Cylinders, etc.

ancillary devices operating from crank shafts, *see* Driving, etc.

anti-detonants supplying to combustion chambers, devices for *see* Miscellaneous.

automatic fuel cut off valves for stopping, *see* Starting, etc.

Bed-plates, frames and casing.

49486, 51091, 51577, 51881.

braking engines by valves in exhaust ducts, control means for, *see* Valves, etc.

cams and camshafts, arranging for operating valves, *see* Valves, etc.

cams and tappets, *see* MECHANISM MISCELLANEOUS.

cartridges for starting engines, *see* AMMUNITION, ETC.

casings or covers for exhaust manifolds, *see* Bedplates.

combustion chambers, *see* Cylinders, etc.

compressing valve springs for facilitating valve assembly, devices for, *see* HAND TOOLS.

compression ratio, means for varying under operating conditions, *see* Cycles, etc.

INTERNAL COMBUSTION, ETC.—*contd.*

cone friction couplings for, *see* MECHANISM MISCELLANEOUS.

cooling, *see* Miscellaneous.

coupling pistons to crank shafts, *see* Driving, etc.

cracking oil fuel and providing steam by utilising heat of exhaust gases, apparatus for, *see* Vaporisers, etc.

Cycles and systems of working (including types of engines).

46606, 48520, 48656, 48974, 49122,
49486, 49688, 50050, 50610, 50993,
51091, 51767, 52006.

cylinder heads, *see* Cylinders, etc.

Cylinders and combustion chambers.

46606, 47102, 47106, 48106, 48238,
48520, 48716, 49203, 49579, 50463,
50869, 51770, 51906, 52025, 52026,
52396, 53101.

distributors for ignition systems, *see* Igniting, etc.

Driving gear.

47958, 48520, 49099, 49122, 49486,
51994, 53066.

electrical device for use in conjunction with carburettor for control of fuel supply, *see* Spray carburettors.

engines, operating petrol on kerosene and like mineral oils, *see* Miscellaneous.

exhaust gas driven turbines, *see* TURBINES, ETC.

Exhaust silencers.

No case.

filtering air and gas, application of and apparatus for, *see* Miscellaneous.

fly wheel starters, *see* Starting, etc.

free piston gas generators, *see* Cycles etc.

free piston machines general construction of, *see* Cycles, etc.

fuel injection valves, *see* Valves, etc.

fuel injectors, *see* Pumps.

fuel injectors and pumps electric apparatus for testing, *see* MEASURING AND TESTING ETC.

fuel oil vaporising and cracking means, *see* Vaporisers, etc.

fuel pump driving arrangements, *see* Driving, etc.

fuel pumps, *see* Pumps.

INTERNAL COMBUSTION, ETC.—Contd.

fuel supply apparatus, carburettor and like, *see* Spray, etc.

fuels for, *see* FUEL, ETC.

gaskets for joints, *see* STEAM ENGINES, ETC.

governors and other speed regulating devices for, *see* GOVERNORS, ETC.

Igniting systems.

46622, 46623, 46692, 48922, 49513, 49704, 50736, 50898, 51895, 51896, 51897, 52011, 52012, 53160, 53449.

ignition systems, condensers for *see* CAPACITANCES, ETC.

impulse starters for internal combustion engines, *see* Starting, etc.

inertia starters, *see* Starting, etc.

injection nozzles, fuel, *see* Pumps.

lubricating, *see* LUBRICATING.

lubricating systems for, *see* LUBRICATING.

Miscellaneous—

Air filters. 47488, 52840.

Anti-detonant supply device. 51506.

Cooling. 48520, 49385, 50993, 52024, 52025, 52144, 53101.

Fuel supply systems. 48656, 50225.

Operating petrol engines on cheaper mineral oils. 47938.

Power units. 53066.

Vibration dampers mounting and arranging. 52750.

nozzles for fuel injectors, *see* Pumps.

operating on two or more fuels, *see* Miscellaneous.

packing, joints-making between relatively fixed parts. *see* STEAM ENGINES, ETC.

packing means for cylinder heads and cylinder blocks, *see* STEAM ENGINES, ETC.

pistons and piston rods, construction of, *see* STEAM ENGINES, ETC.

pre-combustion chambers, diesel engine, *see* Cylinders, etc.

preventing reversing or wrong movement of, *see* Starting, etc.

Pumps. 46874, 48520, 48974, 49175, 49385, 49651, 49688, 50050, 50610, 50653, 51013, 51545, 51883, 52031, 52627, 53307.

INTERNAL COMBUSTION, ETC.—concl'd.

scavenging blowers, *see* Pumps.

scavenging in two stroke cycle engines, arrangements for, *see* Cycles, etc.

spark plug arrangements, *see* Igniting, etc.

spark plugs, *see* Igniting, etc.

sparkling plugs, *see* Igniting, etc.

Spray carburators.

47347, 47572, 47799, 48366, 48656, 53105.

starting motors, controlling conjointly with engine vehicle parts, ambient conditions and other factors, *see* ELECTRIC SUPPLY, ETC.

Starting, stopping and reversing.

46475, 47440, 47957, 47958, 48613, 49893, 51590, 51643, 51994, 52933.

supercharging, *see* Pumps.

turning gear, *see* Starting, etc.

Valves and valve gear. 47363, 47787, 48049, 49293, 49481, 49790, 49978, 51612, 51759.

Vapourisers and heaters.

47938, 48373, 48697, 51280, 53259.

variable air or air fuel mixture delivering rotary pumps, general design of, *see* ROTARY, ETC.

Internal combustion turbines, *see* TURBINES ETC.

Ion exchangers, *see* CHEMICAL PROCESSES, ETC.

IRON AND STEEL MANUFACTURE XXXIII(5).

Converters, metallurgical.

49828.

Extracting from ores—

Direct processes. 48675, 50358, 50795, 51206, 52254.

Smelting processes—

Blast furnace processes.

48893, 50094, 51319, 52751, 53420.

Other than blast furnace processes.

46557, 47690, 48427, 49794, 49992, 50233, 50598.

reduction of iron oxide ore to iron, *see* Extracting, etc. (Direct, etc.).

IRON AND STEEL, ETC.—contd.

refining by blowing oxygen on surface of molten iron in Bessemer processes, *see* Steel making, etc. (Bessemer, etc.).

refining iron in open hearth and electric processes, *see* Steel making, etc.

slag, recovering steel therefrom, *see* Steel making, etc.

Steel making and purifying—

Bessemer processes.

46894, 46895, 48484, 48485, 48486.

Electric processes. 51238.

Miscellaneous—

Addition magnesium to cast iron and deoxidation and desulphurisation of Steel. 52392.

Cast-iron, production of. 48884, 48885, 49896, 52370.

Desulphurisation and desiliconising cast iron. 50304.

Desulphurisation of steel. 46973.

Ferrous metal refining by injecting oxygen into molten metal. 48643.

Forming shaped bodies by reducing ferrous oxides and hot-working. 50795.

Iron treating with additive agents. 50337, 50587.

Recovering steel from waste scrap or slag. 51934, 51936.

Smelling iron ore direct to steel by metallothermic process. 52751.

Steel making and refining and other finishing processes. 49557.

Steel making by direct reduction of iron oxide and carburizing. 48033.

Open hearth and reverberatory furnace processes. 51238.

Recarburising and other finishing processes.

No case.

Ironing devices or presses electrical, *see* HEATING BY ELECTRICITY, ETC.

Iron work constructional, *see* BUILDING, ETC.

Irons, electric, *see* HEATING BY ELECTRICITY.

IRON AND STEEL, ETC.—contd.

Irons for pressing clothes, *see* DYEING, ETC.

Irradiations treating substances with for effecting chemical reactions and sterilisation, *see* CHEMICAL PROCESSES, ETC.

Iso-indolines, *see* CARBON COMPOUNDS, ETC.

Iso-nicotinic acid and its derivatives, *see* CARBON COMPOUNDS, ETC.

Isopyrrole and derivatives, *see* CARBON, ETC.

Isoquinolines, *see* CARBON COMPOUNDS, ETC.

J

Jacks, lifting or hoisting, *see* LIFTING, ETC.

Jelley-like materials dough and like testing otherwise than electrically, apparatus for, *see* GAUGES, ETC.

Jet propulsion plant for aircraft arrangement of, *see* AERONAUTICS.

Jetties, *see* HYDRAULIC ENGINEERING, ETC.

JEWELLERY. LXVI(5).

47165, 47652, 47906, 50322, 50326, 51348, 51573.

Jewels, synthetic, apparatus for manufacturing, *see* JEWELLERY.

Jigs for metal working, *see* METAL WORKING.

Joining metal frame members, *see* METAL WORKING.

Joints and couplings for pipes and tubes, *see* PIPE-JOINTS, ETC.

Joints for electric cables, *see* ELECTRIC COUPLINGS, ETC.

Junction boxes, electric, *see* ELECTRIC COUPLINGS, ETC.

K

Ketols, *see* CARBON COMPOUNDS, ETC.

Ketones, *see* CARBON COMPOUNDS, ETC.

Keto-steroids, *see* CARBON COMPOUNDS, ETC.

Key rings, *see* FASTENINGS, ETC.

Kick starter for motor cycles, *see* MOTOR VEHICLES.

Kilns, *see* FURNACES, ETC.

Kiosks, *see* BUILDINGS, ETC.

Kiosks, advertisement displaying, *see* ADVERTISING, ETC.

KNITTING AND BRADING. XXI(2).

48369, 48412, 48497, 48524, 48617, 48699, 49682, 49683, 49810, 50159, 50177, 50515, 51414, 51885, 52901, 52902.

L

α β -unsaturated nitriles, *see* CARBON COMPOUNDS, ETC.

LABELS, COINS, TOKENS AND TICKETS. XLII(5).

49364, 50385, 52655.

Lactams, *see* CARBON, ETC.

Lacquers, *see* PAINTS, ETC.

Ladders, *see* BUILDING, ETC.

Laevulinic acid and its derivatives, *see* CARBON, ETC.

Laminated sheet materials, *see* PROOFING, ETC.

Laminated sheet materials from regions compositions, *see* PROOFING ETC.

LAMP-CHIMNEYS, GLOBES, LENSES, SHADES, REFLECTORS, AND HOLDERS THEREFOR. XXX(3).

Chimneys, globes like illuminant enclosure.

46921, 47489, 48488, 48515, 50319, 51602.

dome, bowl or like illuminant enclosures, *see* Chimneys, etc.

fastening devices for securing together components of light fillings, *see* Galleries, etc.

Galleries, holders and mountings for chimneys, globes, shades and reflectors.

47235, 49646, 51530, 51798.

Lenses, prisms and equivalent lantern fronts and holders therefor.

46921, 47266, 51602, 52804.

LAMP-CHIMNEYS, ETC.—*contd.*

lighting fittings or reflector, *see* Reflector, etc.

Miscellaneous—

Water tight lighting fittings. 46882.

Obturator, screen and like shutters for obscuring light. No case.

prismatic refractors, *see* Lenses, etc.

reflector mounting fittings, *see* Galleries, etc.

Reflectors and reflecting surfaces.

46578, 47385, 47637, 48249, 49646, 51686.

reflectors securing and supporting means for, *see* Galleries, etc.

Shades. 50280.

supports for light transmission enclosures, *see* Galleries, etc.

water light casings for lamps, *see* Miscellaneous.

Lamp-holders, electric incandescent, *see* ELECTRIC LAMPS, ETC.

Lamps, electric, *see* ELECTRIC LAMPS, ETC.

LAMPS FOR LIGHTING AND HEATING (EXCEPTING BURNERS AND BURNER FITTINGS, LAMPS, CHIMNEYS, GLOBES AND ELECTRIC LAMPS). XXX(4).

Acetylene and like lamps without lanterns.

No case.

cigarette lighters, *see* Igniters, etc.

hurricane lanterns, *see* Portable lamps, etc.

Igniters and lighters for burners, cigars and like.

48120, 48387, 48990, 52566.

light house lamps, electric flasher supply circuit for, *see* ELECTRIC SUPPLY, ETC.

Miscellaneous—

Photographic darkroom safelight. 47235.

Portable lamps other than vehicle, signal and like.

46820, 47235, 47271, 48150, 48488, 48515, 50318, 50919.

pressure lamps or lanterns, *see* Portable, etc.

LAMPS FOR LIGHTING, ETC.—contd.

Search lights, beacon lights buoy and like lamps.

No case.

shut off and control device for lamps, *see* BURNERS, ETC.

sound signals, electric flasher, supply circuit for, *see* ELECTRIC SUPPLY, ETC.

Street shop front, ceiling, wall and like fixed lamps.

47235, 51530, 53419.

Supporting and directing.

51774, 52233.

Systems of lighting. No case.

Vehicle, signal and like lamps. 52804.

wick regulating means for *see* BURNERS, ETC.

Lamp-shades, *see* LAMP-CHIMNEYS, ETC.

Lanterns, storm, *see* LAMPS FOR LIGHTING, ETC.

Lap winding machines, *see* SPINNING, ETC.

Lappets for spinning frames, *see* SPINNING, ETC.

Lasts for boots and shoes, *see* BOOTS, ETC.

Latch operating mechanism for motor vehicle doors, *see* DOOR AND GATE.

Latches for door and the like, *see* FASTENINGS, ETC.

Latex-emulsions, *see* CHEMICAL PROCESSES, ETC.

Lathes, *see* METAL WORKING.

Laying, fixing, suspending and supporting electric cables and conductors, *see* CONDUCTORS, ETC.

Laying conducting filaments on sheet materials, *see* CONDUCTORS, ETC.

Leaching solutions for extracting metals, *see* METALS EXTRACTING, ETC.

Leakage detecting in fuel tanks, *see* TANKS, ETC.

Leakage detector from containers, *see* HOLLOW-WATE, ETC.

LEATHER. XXIV(3).

(Operations and apparatus of interest apart from making leather are indexed under such headings as DYEING ; DISINFECTING.).

compacting and burnishing leather hides or skins, *see* Curryng, etc.

Curryng, impregnating and other finishing processes.

47277, 48568.

dehairing hides, *see* Processes, preliminary, etc.

depilating skins, *see* Processes, etc.

Detaining and recovering tanning materials from waste.

No case.

extracts, for tanning making, vegetable, *see* Miscellaneous.

flashing, *see* Curryng, etc.

Leathers, fancy and leather substitutes produced by tanning processes.

No case.

Miscellaneous—

Bates. 52670.

Staking hides and skins. 47212.

Tanning liquors. 49815, 50782, 52834.

Tanning materials. 50067, 50803, 50804, 50863, 51250, 52657, 52705, 52706, 52707, 52708, 52709, 52798, 52799, 52835.

Treating tan liquors. 52834.

Vegetable tan liquors. 49815.

ornamenting, *see* Miscellaneous.

Processes, preliminary to tanning (including apparatus for such processes). 47031, 48987, 48988, 50806, 52013.

retanning tanned leather, *see* Tanning, etc.

staking hides and skins, *see* Miscellaneous.

tanning materials, *see* Miscellaneous.

Tanning processes, (including apparatus for such processes).

50067, 50969, 51201, 53196, 53197.

Leather cloth, *see* PROOFING, ETC.

Leather drying, *see* DRYING, ETC.

Lenses for spectacles, *see* SPECTACLES, ETC.

Lenses moulding from thermoplastic materials, *see* MOULDING, ETC.

Lenses, optical, other than for eyeglasses, see PHILOSOPHICAL, ETC.

Levels, see PHILOSOPHICAL, ETC.

Lids forming light joints with receptacles, see STOPPERING, ETC.

LIFE SAVING APPLIANCES, MARINE AND FIRE. XXXIX(5).

49001, 51567.

LIFTING, LOADING AND CONVEYING SOLIDS. XLIX.

(Adaptation and arrangement of lifting, lowering and hauling apparatus for traction of vehicles or for handling ships and boats are indexed under headings denoting such special use. Only features of interest apart from particular use are indexed here.)

aerial menorail systems, see RAILWAY, ETC., PERMANENTWAY, ETC.

automotive vehicles with gathering and conveying means, see Combination, etc.

belt or chain conveyors, endless, see Endless, etc.

Cable haulage and aerial ropeways. 48007.

chain hoists, see Grabs, etc.

chutes for pneumetically conveying materials, see Miscellaneous.

Combination plants for mechanically handling and stacking materials.

46815, 47556, 47759, 49901, 49984, 50457, 50632, 51127, 51465, 51874, 52934, 52002, 52069, 52110, 52151, 52612, 52613, 52928, 53016, 53326.

controlling electric motors of winding engines, cranes, lifts and the like, see Motor controlling, etc.

conveying solids by undulated flaccid members, see Miscellaneous.

conveyor belts made of fabrics coated with thermoplastic materials, see PROOFING, ETC.

conveyors for guiding motor vehicles to parking stalls, see Miscellaneous.

delivering materials through spirals, see Endless, etc.

doors for lifts, see Lifts and eages.

dumping or tipping apparatus for acting on wagons, vessels, and portable receptacles, see Combination, etc.

LIFTING, LOADING, ETC.—contd.

electric control for conveyor and lift motors, see MOTOR CONTROL, ETC.

electric signalling systems for conveyors and haulage apparatus, see ELECTRIC SIGNALLING, ETC.

Endless belt, chain, bucket, screw and rotary conveyors and elevators.

46519, 46776, 47628, 47651, 47669, 48130, 48336, 48644, 48645, 48646, 48709, 48738, 48751, 48774, 48936, 48999, 49082, 49304, 49366, 49409, 49758, 49895, 50508, 50509, 50547, 50842, 50843, 50859, 51629, 51788, 52101, 52322, 52358, 52422, 52554, 52985, 53050, 53260.

Grabs, lifting dogs, skips, tip buckets, slings and like load engaging, releasing and depositing means.

46539, 51062, 51417, 52070.

Jacks. 48087, 48281, 51680, 52728, 52826.

Lifts and cages.

47254, 47634, 48409, 49274, 49533, 51591, 53302.

lifts in aircrafts arrangement and disposition of, see AERONAUTICS, ETC.

mechanically handling, conveying and stacking material, devices for, see Combination, etc.

mine windus, remote control systems for, see ELECTRIC SIGNALLING, ETC.

Miscellaneous—

Cement batching and conveyor mechanism. 50981.

Chutes for pneumetically conveying materials. 50980.

Controlling flow of powdered meterial. 49917.

Conveying and distributing fibres. 51617.

Conveying coal. 47609.

Conveying pulverulent material by air or gases. 51388.

Conveying pulverulent solids by undulated members. 49076.

Conveyors for guiding motor vehicles to parking stalls. 48298.

Pneumatic conveying apparatus. 52346, 53422.

Receptacle for transporting materials. 51465.

Safety devices for hoisting and like apparatus. 48666.

Vibratory conveyors. 46771.

LIFTING, LOADING, ETC.—contd.

Miscellaneous—contd.

- Winding and paying out apparatus for electric cables. 47223.
- pneumatic conveying apparatus, *see* Miscellaneous.
- pulverulent material conveying by air or gases, *see* Miscellaneous.
- safety device for hoisting and like apparatus. *see* Miscellaneous.
- scoops for raising loads, *see* Grabs, etc.
- storage apparatus for books or the like articles, *see* Combination, etc.
- tipping apparatus, loading and unloading, *see* Combination plants, etc.
- travelling conveyors of endless type, *see* Endless, etc.
- vehicle hoists or lifts, *see* Lifts, etc.
- Winches and cranes.
47020, 48409, 49230, 49243, 51583, 52292, 53040.
- winding and paying out apparatus for lifting and lowering, *see* Winches, etc.
- winding up and paying out apparatus, cable and conductor, *see* Miscellaneous.
- Light transmission enclosures for lamps, supports for, *see* LAMP-CHIMNEYS, ETC.
- Light units, supports for, *see* LAMPS FOR LIGHTING, ETC.
- Lighthouse lamps, electric current supply circuit for, *see* ELECTRIC SUPPLY, ETC.
- Lighting fittings, *see* LAMPS-CHIMNEYS, ETC.
- Lightning arrestors, *see* ELECTRIC SUPPLY, ETC.
- Lignin and decomposition products thereof, *see* CARBON COMPOUNDS, ETC.
- Lime, caustic, *see* CHEMICAL COMPOUNDS, ETC.
- Lining for roofs and walls, *see* BUILDINGS, ETC.
- Link bands for chains, *see* CHAINS, ETC.
- Linoleum and like sheets, *see* PROOFING, ETC.
- Lipsticks, *see* TOILET, ETC.
- Liquid and gaseous media controlling reactions, in, *see* CHEMICAL PROCESSES, ETC.
- Liquid containers, filling by suction, *see* WATER, ETC., RAISING, ETC.
- Liquid fuels, *see* FUEL, ETC.
- Liquid level detectors, *see* WATER AND OTHER LIQUID LEVELS, ETC.
- Liquid meters flow operated, *see* HYDRAULIC ENGINEERING, ETC.
- Liquid meters, pressure actuated, *see* HYDRAULIC PRESSES, ETC.
- Liquid pressure actuated motors, *see* HYDRAULIC PRESSES, ETC.
- Liquid pressure control systems for brakes, *see* BRAKES, ETC.
- Liquid resistance for electric motors, *see* CAPACITANCES, ETC.
- Liquids, cooling, *see* COOLING, ETC.
- Liquids, delevering measured quantities of, *see* MEASURES, ETC.; CAPACITY, ETC.
- Liquids, distilling, *see* DISTILLING, ETC.
- Liquids, heating. *see* HEATING SYSTEMS, ETC.
- Liquids, level indicating or registering of, *see* WATER, ETC., LEVEL, ETC.
- Liquids purifying by ion exchangers, *see* WATER, ETC., PURIFYING, ETC.
- Liquids, supplying in measured quantities, *see* MEASURES, ETC.
- Liquids, unspecified and water purifying, *see* WATER, ETC., PURIFYING, ETC.
- Liquified gases, storing, *see* AIR, ETC.
- Liquifying air and gases, *see* AIR AND GASES, ETC.
- Lithographic printing machines, *see* PRINTING.
- Loading coils for telephones circuits, *see* TELEPHONES, ETC.
- Locating faults in cables, electrically, *see* MEASURING AND, ETC.
- Loading machines, *see* LIFTING, ETC.
- Loading shuttles, *see* LOOMS.
- Locking devices other than key operated for carriage and other doors, *see* FASTENINGS, ETC.
- Locking nuts, bolts nut screws and the like, *see* BOLTS, ETC.

**LOCKS (KEY AND PERMUTATION),
SAFES AND STRONG ROOMS.
LXIV(5).**

Key operated locks, other than padlocks
shackle and hasp-locks.

46758, 49558, 50676, 51169.

key rings, see FASTENINGS, ETC.

locks, key operated, see Key operated,
etc.

Miscellaneous—

No case.

Padlocks, shackle and hasp locks (key
operated).

48256, 48548.

Permutation locks.

48230, 51941, 51978.

Safes and strong rooms.

No case.

Locks or latches for doors, see FASTEN-
INGS, ETC.

Locomotive draft producing appliances,
see CHIMNEYS, ETC.

**LOCOMOTIVES AND TRACTION
ENGINES, PORTABLE AND SEMI-
PORTABLE ENGINES. XLV(2).**

*(This heading includes only compo-
nents and details of special interest
in respect of locomotives and traction
engines, etc. Features of interest
apart from locomotives, etc., are
indexed under headings denoting the
parts affected.)*

endless-tracks for vehicles, see Endless,
etc.

Endless-track vehicles and tractors,
general designs of.

46697, 46698, 48739, 49236, 51051,
51093, 52015, 52692.

Locomotives, general design of—

Bunkers, tanks and tenders. 47546.

Condensers, coolers, feed water heat-
ers and superheaters, heat accumu-
lators, arrangement and disposition
of.

No case.

Cylinder, drain valves and cocks and
gear arrangements of exhaust reser-
voirs and valves.

48399.

Driving gear, arrangement of. 53066.

Frames, plate and bar.

No case.

**LOCOMOTIVES AND TRACTION, ETC.
—contd.**

Locomotives, etc.—contd.

Miscellaneous—

No case.

Wheels, bogies and exles, arrange-
ment and disposition of (includ-
ing adjusting distribution of weight
on axles).

No case.

lubrication units for, see LUBRICAT-
ING.

safety valves, construction of, see
VALVES, ETC.

smoke-boxes, see STEAM GENERATORS

smokestacks, see CHIMNEYS, ETC.

steering mechanisms for tractors, see
MOTOR VEHICLES.

Traction engines, portable and semi-
portable engines. 49993.

LOOMS. XXI(3).

bobbin changing devices, see Weft, etc.
(Weft doubling, etc.)

bobbin stripping mechanism, see Mis-
cellaneous.

buffers, see Weft, etc., (Miscellaneous).

circular looms, see Shuttleless, etc.

cleaning looms, see Miscellaneous.

cloth beam supports, see Miscellaneous.

cop changing mechanism, see Weft, etc.
(Weft, doubling, etc.)

cop loaders, see Weft, etc. (Weft doubl-
ing, etc.)

dobbies, see Shedding, etc.

driving mechanism for sley, see Weft,
etc. (Lays, etc.).

Driving, reversing, stopping and start-
ing.

47541, 52668.

drop box motion, see Shedding, etc.

easing motion of warp mechanisms for,
see Warp, etc.

flat looms, see Shuttleless, etc.

frame construction, see Miscellaneous.

heddle frames, see Shedding, etc.

letting off warp yarns, see Warp, etc.

loading cops, see Weft, etc. (Weft, doubl-
ing, etc.)

loading, shuttleless, see Weft, etc. (Weft,
etc.)

LOOMS—contd.**Miscellaneous—**

Bobbin stripping mechanism. 50706.

Cloth beam supports. 50309.

Loom cleaners. 49850.

Loom construction including construction of frames and supports. 50308, 50311.

Loom with sizing arrangement. 53278.

Suction device. 49751.

Take-off motions, etc. 50982.

Weft searching device. 49833.

pickers, *see* Weft, etc. (Pickers, etc.)pile fabric looms, *see* Shuttleless, etc.**Shedding mechanism.**

48319, 49752, 50307, 50310, 51185, 52039.

Shuttleless, pile fabric, swivel and like special looms.

46637, 46778, 46779, 47543, 47544, 47545, 47568, 48027, 48029, 48095, 48096, 48857, 48916, 48966, 49030, 49031, 49147, 50037, 50282, 50589, 50639, 50682, 50801, 50802, 50883, 50914, 50944, 50982, 51983, 52775, 52953, 53228, 53229, 53357, 53428,

shuttles, *see* Weft, etc. (Shuttles, etc.)small ware looms, *see* Shuttleless, etc.swells, *see* Weft, etc. (Miscellaneous).throw shuttle looms, *see* Shuttleless, etc.travelling loom cleaners, *see* Miscellaneous.**Warp and fabric letting off, taking-up guiding and tensioning in.**

48632, 48633, 48634, 50306, 50514, 51082.

warp yarn easing mechanisms, *see* Warp, etc.weft carrying device in circular looms, *see* Shuttleless, etc.weft detectors, *see* Weft, etc. (Miscellaneous).weft doubling and twisting mechanism, *see* Weft, etc.weft feeling device, *see* Weft, etc. (Miscellaneous).weft selection mechanism, *see* Weft etc. (Miscellaneous).**LOOMS—concl'd.**

Weft supplying, inserting, heating up, cutting, doubling and twisting in (other than for shuttleless and like special looms)—

Beat-up motions and change box motions.

No case.

Lays, lathes or stays. 47798.

Miscellaneous—

Buffers. 51186.

Swells for shuttles. 51097.

Weft detectors. 46800.

Weft feeling device. 52702.

Weft selection mechanism. 49948.

Pickers, shafts, traps and connections and picking motions.

46941, 49760, 50292, 50312, 50460, 50510, 50975, 50976, 51117, 51174, 52267, 52469, 52926, 52927, 52978, 52979, 53246.

Shuttles (including guards therefor).

46978, 48435, 48814, 49090, 49832, 50005, 50163.

Weft, cutting, deflecting, slackening, tensioning, and undulating.

No case.

Weft, doubling and twisting and replenishing mechanism.

47128, 47541, 47601, 48883, 49242, 51586, 52472, 53247.

Loose leaf binders, *see* FILING, ETC.Loud speakers, *see* TELEPHONES, ETC.Louvres, window, *see* DOORS, ETC.Louvres, window, mechanism for operating *see* DOORS AND, ETC.Lozenges, medicinal, *see* DISINFECTING, ETC.Lubricant, additives, *see* OILS, ETC.Lubricants, *see* OILS, ETC.**LUBRICATING. LIV(2).**axe boxes, reservoirs and passages for lubricants in, *see* passages, etc. (Bearings).bearings, lubricating passages and reservoir for, *see* Passages, etc., (Bearings.)

Cans and other portable containers for applying lubricants.

No case.

LUBRICATING—contd.

couplings for grease guns and nipples, see Lubricators, etc. (Force-feed).

feed-pumps for conveying lubricants in bearings, see Lubricators, etc., (Force-feed).

grease guns or compressors, see Lubricators, etc., (Force-feed).

grease injectors, see Lubricators, etc. (Force-feed).

indicators or tell, tales for lubricant supply systems, see Lubricators, etc. (Miscellaneous).

lubricant receiving nipples, see Lubricators, etc., (Miscellaneous).

lubricant servicing units for vehicles, see Cans, etc.

lubricating pumps, see Lubricators, etc., (Force-feed).

lubricating track tractor rollers, see Passages, etc. (Bearings.)

Lubricators and lubricating bearing surfaces (other than lubricating passages channels and reservoirs)—

Conveying lubricants by means other than force feed, gravity feed, or mechanical means. 51020.

Force-feed.

46698, 46840, 47052, 47112, 47137, 47397, 47561, 47901, 48117, 48197, 50907, 51577, 52188, 52626.

Gravity-feed. 47058.

Lubricant conveyed by mechanical means.

46789, 52882.

Miscellaneous—

Indicators for lubricant supply systems. 47113.

Nipples. 48423, 53017.

Oil purifying devices in feed systems. 53416.

lubricant compressors, see Lubricators, etc. (Force-feed).

lubricators for rails mounted on vehicles and lubricants conveyed by mechanical means, see Lubricators, etc. (Lubricant conveyed, etc.)

metering devices for pressure feed distributing systems, see Lubricators, etc. (Force-feed.)

nipples for lubricating devices, see Lubricators, etc. (Miscellaneous).

LUBRICATING—concl'd.

Passages, channels and reservoirs for guiding or containing lubricant in machinery in—

Bearings.

46696, 46697, 46698, 47112, 47138, 48038, 52756, 52954.

Connecting rods, cranks, crossheads, eccentrics and knuckle and like joints.

No case.

Cylinders, pistons, piston rods and stuffing boxes. 52626.

Machinery and apparatus, unclassified. Gear wheels, 48611.

Inspection cover. 51881.

Lekage if oil along shafts means for preventing. 50778.

Rock drills and other Compressed air operated tools. 51020.

purifying oil in lubricants feeding systems, see Lubricators, etc. (Miscellaneous).

rail lubricators with rail deflection actuated lubricant pumps, see Lubricators, etc. (Force-feed).

spinning spindles lubricating by mechanical means, see Lubricators, etc. (Lubricants, etc.)

Lubricating compositions, see OIL AND LUBRICANTS.

Lubricating oil, see OILS, ETC.

LUMINESCENT MATERIALS AND APPLICATIONS THEREOF. LXIII(2).

46865, 47213, 47435, 47784, 47992, 48472, 48516, 48627, 48648, 49717, 49936, 51012, 51033, 51057, 52647, 53269.

Luminescent pigments, see LUMINESCENT, ETC.

Luminous coating compositions, see PAINTS, ETC.

Lysergic acid, see CARBON COMPOUNDS ETC.

M

Machine guns, see SMALL ARMS, ETC.

Machine tools, see METAL WORKING.

Magnesium extraction of, see METALS, EXTRACTING, ETC.

Magnesium-alloys, see ALLOYS.

Magnetic core structures, for electric transformers, see ELECTRIC CURRENTS, ETC.

Magnetic cores, see DYNAMO-ELECTRIC, ETC.

Magnetic data storage systems. see CALCULATING, ETC.

MAGNETIC, ELECTROSTATIC AND LIKE SEPARATORS. XXXIII(6).

47232, 47381, 47467, 47743, 50464, 51625, 52924, 53230.

Magnetic fluids, *see* DYNAMO-ELECTRIC ETC.

Magnetic instruments, telephones, *see* TELEPHONES, ETC.

Magnetic materials for cores, *see* DYNAMO-ELECTRIC, ETC.

Magnetic measurements and tests, *see* MEASURING AND, ETC.

Magnetic sound recording and reproducing devices, *see* PHONOGRAPHS, ETC.

Magnetic information storage and control equipments for telephone systems, *see* TELEPHONES, ETC.

Magnetic information storage devices, *see* ELECTRIC SIGNALLING, ETC.

Magnetic switches, *see* ELECTRIC SWITCHES, ETC.

Magnetic tape recorders, *see* PHONOGRAPHS, ETC.

Magnetrons, *see* VACUUM, ETC.

Magnets, *see* DYNAMO-ELECTRIC, ETC.

Make and break switches, electric, *see* ELECTRIC SWITCHES, ETC.

Malonic acid derivatives, *see* CARBON COMPOUNDS, ETC.

Malted food, *see* FOOD PREPARING, ETC.

Malted milk products, *see* FOOD, ETC.

Manganese dioxide, obtaining by electrolysis, *see* ELECTROLYSIS, ETC.

Manganese, extraction of, *see* METALS, EXTRACTING, ETC.

Manganese sulphate, *see* CHEMICAL COMPOUNDS, ETC.

Mantles and mantle fittings for incandescent lamps, *see* BURNERS, ETC.

MANURES AND FERTILIZERS. I(4)

46666, 46835, 46904, 46905, 46906, 47094, 47196, 47430, 47439, 47645, 47696, 47721, 47724, 47735, 47752, 48616, 48986, 49075, 49178, 49702, 50567, 51235, 51549, 51699, 52165, 52786, 53251, 53347, 53459.

Margarine, *see* FOOD, ETC.

Master cylinders for pneumatic pressure systems, *see* AIR AND GASES, ETC.

MATCHES. XXXII(4).

No case.

Mattresses, packing, *see* PACKING, ETC.

MEASURES OF CAPACITY AND DELIVERING MEASURED QUANTITIES. XLI(8).

Liquids, sampling. No case.

Measured quantities by volume, apparatus for separating from bulk and delivering—

(comprising only apparatus requiring external operation and adapted at each repeated and identical operation to measure and separate a predetermined volume and deliver it).

Granular and like fluent solid materials, volume apparatus for delivering. 50053, 52271.

Miscellaneous—

Metering measured quantities by weight. 50225.

Withdrawing liquid in pipes and containers after delivery of measured quantities. 47636.

Volume apparatus for liquid having fixed measuring chambers. 48947.

Volume apparatus for liquids having moving measuring chambers. 46723.

Measures of capacity. No case.

metering measured quantities of liquid by weight, *see* Measured, etc. (Miscellaneous).

proportioning pumps, reciprocating type, *see* PUMPS, ETC.

withdrawing liquids from supply lines and containers after delivery of measured quantities, *see* Measured, etc. (Miscellaneous).

MEASURING AND TESTING ELECTRICALLY. LVIII(6).

apparatus for comparing instantaneous values of voltages, *see* Electric, etc.

apparatus for measuring speed rotating shafts, *see* Electric, etc.

bearing assemblies for meter spindles, *see* BEARINGS, ETC.

bearings for power and energy meters, *see* BEARINGS, ETC.

counting apparatus, *see* CALCULATING, ETC.

MEASURING, ETC.—*contd.*

current meters for measuring velocities of streams in rivers and chambers, see Meters, etc.

detecting cavities in articles by ultrasonic waves, see Electric, etc.

devices for measuring partial pressures of water or other vapours see Electric, etc.

distances or relative movements between movable parts, electric measuring systems for, see Electric, etc.

earth's formations investigating electrically, apparatus for, see Geophysical etc.

Electric and magnetic tests and measurements (other than those for geophysical exploration and current, pressure and resistance measuring).

46581, 46652, 47011, 47074, 47151,
47167, 47264, 47275, 47348, 47622,
48380, 48467, 48501, 48636, 48940,
48989, 49414, 49659, 49800, 49824,
49842, 50335, 50369, 50398, 50478,
50520, 50819, 51273, 51396, 51397,
51603, 52010, 52151, 52437, 52547,
52556, 52575, 52806, 52919, 52937,
52966, 53185, 53242, 53277.

electrical logging of earth formations, see Geophysical, etc.

electro-dynamometers for measuring current, voltage or resistance, see Meters, etc.

frequency of alternating currents, measuring, see Electric, etc.

fuel injectors or fuel injection pumps for internal combustion engines, apparatus for testing, electrically, see Electric and magnetic, etc.

Geophysical exploration by electric and magnetic means. 46529, 46530, 47395, 47396, 48945, 49544, 49972, 50578, 51188, 51436, 51926, 52377, 52380, 52556, 52622.

gloss measuring devices electric, see Electric and magnetic, etc.

harmonics, eliminating from mains supply circuits, see TELEGRAPHS, ETC.

infra-red radiations, means for electrically examining, see Electric, etc.

logging of the earth formations see Geophysical, etc.

magnetic tests, see Electric, etc.

MEASURING, ETC.—*concl'd.*

Meters, electric (including galvanometers and other current voltage, and resistance measuring instruments). 46482, 47456, 48245, 49095, 49472, 49659, 50636, 52087, 52186, 53377.

Miscellaneous—

Apparatus for measuring load capacity of earth's strata.

47703.

Electric leak detector. 48035.

phase comparing devices, see Electric, etc.

phase relation of radio waves, indicating and measuring see Electric, etc.

phase relations between electrical quantities, apparatus for indicating, see Electric, etc.

rotational speeds of shafts apparatus for measuring electrically, see Electric, etc.

seismic exploration, see Geophysical, etc.

testing continuity of conductors and electric circuits, electric apparatus for, see Electric, etc.

textile threads, electric examining apparatus for, see Electric, etc.

time measuring electric and electromagnetic devices other than electric clocks, see Electric etc.

well logging apparatus electric, see Geophysical, etc.

Measuring instruments, electric, see MEASURING, ETC.

Measuring lengths other than electrically apparatus for, see GAUGES, ETC.

Meat safe, see COOKING, ETC.

M E C H A N I S M, MISCELLANEOUS. LXV(1).

(This heading comprises only construction of such mechanisms as clutches, gearings, link-work, etc. Adaptations and arrangements of these mechanisms for particular machines are indexed under headings for such machines.)

adjustable friction gears, see Gearing variable, etc.

automatic speed control device, centrifugally actuated expanding pulley, see Gearing variable, etc.

balancing rotating devices, see Mechanism, etc.

MECHANISM, MISCELLANEOUS—contd.

belt fasteners for transmission belting,
see Gearing, etc.

cams and tappets, see Link work, etc.

Clutches for conveying rotary motion.

46930, 46931, 47269, 47480, 48662,
48773, 49957, 50561, 50568, 50660,
50773, 50777, 50901, 51419, 52747,
52929, 53434.

conjugate gears, see Gearing, toothed,
etc.

Countershafts, crankshafts, and shafts
and spindles. No case.

coupling for rotary shafts, see Mecha-
nism, etc.

coupling links for control devices, see
Link work, etc.

couplings for shafts, gearing and other
machine elements for transmission
at rotary motion, see Mechanism, etc.

couplings, gears and like securing on
shafts, see Mechanism, etc.

drive control and transmission mechani-
sm for reciprocating and angularly
movable members, see Mechanism,
etc.

driving belts, tension adjusting devices
for, see Gearing belt, etc.

epicyclic gearing, see Gearing variable,
etc.

free wheel devices for internal combus-
tion engines, arrangement of, see
INTERNAL, ETC.

free wheel mechanisms, see Link work,
etc.

friction clutches and couplings, see
Clutches, etc.

friction gearing see Gearing toothed,
etc.

gear wheels, see Gearing toothed, etc.

gear wheels, lubricating, see LUBRI-
CRATING.

Gearing belt, rope and chain.

46909, 47576, 47641, 47841, 48031,
48032, 48840, 48928, 48963, 50231,
50397, 50500, 50501, 51314, 52172,
52237, 52985.

Gearing for conveying or converting
reciprocating and rotary motion
(comprising arrangements only of
two or more types of gearing through
all of which motion is transmitted).

46827, 48601, 51102, 53029, 53038.

Gearing for stopping and starting
machinery. No case.

MECHANISM, MISCELLANEOUS—contd.

Gearing, toothed and friction.

48181, 48611, 50218, 51451, 52560,
53447.

Gearing, variable speed, differential and
reversing.

46665, 47795, 48542, 48614, 48662,
50061, 50132, 50421, 50901, 50945,
51272, 51364, 51451, 52007, 52237,
52427, 52747, 52883, 52934, 53066,
53138.

guide pulleys for belts, see Gearing belt,
etc.

jockey or tension pulleys for belt
drivers, see Gearing, belt, etc.

Link work, cams, tappet and ratchet and
like gearing.

46847, 49496, 51419, 51688, 52488,
52635, 52636.

link work for engine accelerator system
in motor vehicles, see MOTOR
VEHICLES.

machine belting, see Gearing belt, etc.

machining gears, see METAL WORK-
ING.

magnetic driving devices, see DYNAMO
ELECTRIC, ETC.

Mechanism not other wise provide for.

46628, 47159, 47819, 48032, 48389,
48575, 48653, 48832, 49155, 49161,
50773, 52232, 52562, 52996.

noise damping means for gear wheel
assemblies, see Gearing toothed, etc.

pawl and ratchet mechanism operated
by electromagnets for automatic
switches in telephone circuits, see
TELEPHONES, ETC.

phase alternation couplings for shafts,
see Mechanism, etc.

powder couplings for power transmis-
sion, see Clutches, etc.

power transmission mechanisms vari-
able speed, see Gearing, variable, etc.

power transmission mechanisms for
lathes and other machine tools, ar-
rangement and disposition of, see
METAL WORKING.

power transmitting belts devices for
adjusting the tension of, see Mecha-
nism, etc.

pulleys driving and the like, see Gear-
ing belt, etc.

pulleys, expanding for variable speed
devices, see Gearing variable, etc.

MECHANISM, MISCELLANEOUS—concl'd.

- pulleys fixing on shafts, *see* Mechanism, etc.
- pulleys for belt gearing, *see* Gearing belts, etc.
- reverse speed and variable speed coupling devices, *see* Gearing variable, etc.
- shaft positioning devices, *see* Mechanism etc.
- sneaves or pulleys, driving and like, *see* Gearing belt, etc.
- step-by-step driving mechanisms electric, *see* ELECTRIC SUPPLY, ETC.
- step-by-step linear drive mechanism, *see* Linkwork, etc.
- torque transmitting couplings for shafts *see* Mechanism not otherwise, etc.

MEDICAL AND SURGICAL APPLIANCES XIX(2).

- anaesthetic compositions, *see* DISINFECTING, ETC.
- applicators, bandage, *see* Miscellaneous, etc.
- auscultation, and percussion sounding instrument, *see* Ear, etc.
- Bandages, dressings pads, plasters and adhesive bandages and catamenial appliances.
 - 46617, 47036, 47662, 47674, 48659, 48746, 48799, 50066, 50108, 51371, 51609, 51726, 53398.
- Deformity, fracture and like appliances, surgical and artificial limbs and trusses. 47305.
 - 47305.
- Dental operating appliances and instruments. No case.
- dressings, *see* Bandages, etc.
- Earinstruments and hearing appliances (including stethoscopes). 50247.
- Electric and magnetic appliances.
 - 47972, 50603, 52856.
- Fertility period in women, device for indicating, *see* INDICATING, ETC.
- hibernating apparatus, *see* Miscellaneous.
- hypodermic syringes, *see* Medicines, etc.
- male organ erecting devices, *see* Miscellaneous.

MEDICAL AND, ETC.—cont'd.

- medicinal dose computers, *see* INDICATING, ETC.
- Medicines, administering (including syringes, pumps and like appliances).
 - 46830, 47413, 47736, 47855, 48400, 48483, 50093, 50458, 50642, 52245, 53338, 53442.
- Miscellaneous—
 - Applicator for bandages. 51717.
 - Blood grouping means. 48379.
 - Body heating appliances. 49902.
 - Hibernating apparatus. 53285.
 - Male organ erecting device. 50332.
 - Releasing apparatus for childbirths. 50722.
 - Rubber soothers. 52063.
 - Surgical tables. 53328.
 - Therapeutic appliances using radiations. 47972, 50603.
 - X-ray diagnostic apparatus. 48323, 52288, 52689, 52690.
- packing bandages, *see* PACKING, ETC.
- Pessaries, surgical and suppositories and rectal appliances. 47121, 47122, 47123, 48265, 49940, 50108, 51349, 51350.
- releasing apparatus for childbirths, *see* Miscellaneous.
- Respiratory appliances.
 - 47184, 51529, 52479.
- sanitary napkins, *see* Bandages, etc.
- skull caps for surgeons, *see* DRESS, ETC.
- spermicide sponges, *see* Pessaries, etc.
- Stands, trays and like supports.
 - No case.
- surgical dressings, *see* Bandages, etc.
- Surgical operating appliances including optical instruments, surgical. 53107.
- tampons, intravaginal, *see* Pessaries, etc.
- tampons, surgical *see* Pessaries, etc.
- x-ray apparatus for electro therapy, *see* VACUUM, ETC.
- Medical preparations, *see* DISINFECTING ETC.
- Medicinal dose computers, *see* INDICATING, ETC.
- Medicinal ointments, *see* DISINFECTING, ETC.

Medicinal preparations, *see* DISINFECTING, ETC.

Melamine, *see* CARBON COMPOUNDS, ETC.

Melting and refining of ferrous materials, *see* IRON & STEEL, ETC.

Melt-spinning, artificial filaments, *see* CELLULOSE, ETC.

Melt-spinning of polymers, *see* CELLULOSE, ETC.

Memory systems for counting and calculating machines, *see* CALCULATING, ETC.

Menstrual appliances, *see* MEDICAL, ETC.

Mercurated alkyl biuret derivatives, *see* CARBON, ETC.

Metal bars, rods and like producing by extrusion *see* METAL WORKING.

Metal bonding to rubber, *see* INDIA RUBBER, ETC.

Metal extrusion presses, *see* METAL WORKING.

Metal oxides obtaining from ores, *see* CHEMICAL COMPOUNDS, ETC.

Metal pipes and tubes, making, *see* METAL WORKING.

Metal rectifier assemblies, *see* ELECTRIC CURRENTS, ETC.

Metal sheets producing by electrolysis, *see* ELECTROLYSIS, ETC.

Metal surfaces, bonding to rubber *see* INDIA RUBBER, ETC.

Metal surfaces, cleaning, *see* INCRUSTATION, ETC.

Metal tubes, *see* PIPES, ETC.

Metal tubes, producing by extrusion, *see* METAL WORKING.

Metals, casting, *see* CASTING METALS.

Metals, cutting, *see* METAL WORKING.

Metals depositing on wires by electrolysis, *see* ELECTROLYSIS, ETC.

Metals, extruding, *see* METAL WORKING.

Metals, rolling, *see* METAL WORKING.

METAL WORKING. XXXV.

arc welding, *see* Welding, etc.

Bending. 46733, 47324, 47711, 47994, 48584, 49813, 49845, 50566, 50820, 51150, 51656, 51858, 52312, 53115, 53180

burning devices, *see* Miscellaneous.

METAL WORKING—*contd.*

coiler drum for coiling metal strips, *see* Bending.

coiling and winding metal strips, *see* Bending.

collets for machine tools, *see* Turning.

corrugating metal strips, *see* Bending.

counter sinking attachments for drill bits, *see* Drilling.

draw benches, *see* Drawing.

Drawing. 47416, 47417, 47418, 47748, 47952, 48232, 51588, 51721, 51740.

Drilling. 47588, 50010, 50584, 52500.

electric spark cutting devices, *see* Miscellaneous.

extrusion presses, *see* Miscellaneous.

fabricating railroad car sides, *see* Miscellaneous.

Fluxes for metal working purposes.

46914, 47082, 50565, 50950, 51873.

Forging. 46571, 47930, 50208, 53394.

grinding, and abrading machines, *see* POLISHING.

hydraulic control valves for forging presses, *see* VALVES, ETC.

hydraulic forging presses, *see* HYDRAULIC PRESSES, ETC.

hydraulic presses for metal pressing operations, *see* HYDRAULIC PRESSES, ETC.

hydraulic thrusters for pipe bending machines, *see* HYDRAULIC PRESSES, ETC.

impellers and other elements of hydraulic torque transmitting devices making, *see* Miscellaneous.

jigs and work holders, *see* Miscellaneous.

jigs for fabricating sheet metal rail road cars, *see* Miscellaneous.

lathes, *see* Turning.

metal, cutting by flame, *see* Miscellaneous.

metal tubes, making otherwise by rolling, *see* Miscellaneous.

metal working presses, *see* Forging, etc.

Milling. 53447.

Miscellaneous—

Apparatus for joining wires. 47930.

Applying cutting liquids to cutting tools. 47522.

METAL WORKING.—contd.

Miscellaneous—contd.

Axle box liner making. 48673.
 Bellet extrusion presses. 47563.
 Bolts, making. 52704.
 Breaking cast iron and like. 51279.
 Burring tool. 52885.
 Cage pinions making. 47635.
 Combined process of bending pressing and rolling. 48502.
 Cooling of working material during metal working operations. 51964.
 Cutting. 47322, 47993, 48925, 49642, 49971, 50748, 52152.
 Cutting, bending and welding. 50156, 52910.
 Cutting fluid jet mounts for cutting tools. 48555.
 Cutting or removing flash from a welded joint. 47712.
 Devices for turning objects on inspection benches. 47819.
 Electric contact springs making. 46790.
 Electromagnetic coils making. 53437.
 Extruding. 47548, 47679, 47730, 48026, 49342, 49823, 49869, 49870, 49956, 50058, 52032.
 Extrusion presses. 47547.
 Fabricating railroad car bodies. 46671.
 Fabricating structural members from sheet metal. 51577.
 Flame cutting of metal. 46582, 46686, 50664, 52494.
 Flame machining. 51234, 52119.
 Forming and hot-working of sub-density ferrous bodies. 50795.
 Hammering, pressing and rolling. 47046.
 Hollow metal bodies forming by bending, welding shaping and pressure. 51734.
 Impellers and other vaned elements, making. 49961.
 Jigs and fixtures. 46607, 46720, 51247.
 Joining of metal parts. 53444.
 Machine tools, smoke suppressing devices for. 48554.
 Metal pipes and tubes, making. 46673, 47871, 47924, 47965, 47966, 47967, 52160.

METAL WORKING.—contd.

Miscellaneous—contd.

Metal shields for lamps, making. 50634.
 Metal stripping machine. 49677.
 Nicking machines. 47477.
 Perforating well casing. 46513, 52936, 52956.
 Profile attachment for metal working machines. 51745.
 Reticulated metal sheets, making. 51739.
 Slide fasteners making. 50261.
 Slotting, deforming and welding in combination. 51094.
 Templates for metal cutting. 51870.
 Tool holders. 49209.
 Twisting steel bars. 48923.
 Tyre rim, making. 52634.
 Wire loops forming. 47713.
 Work holders for metal working purposes. 48273.
 Oxy-acetylene torches construction of see BUILDINGS, ETC.
 Planning, shaping and slotting. 46843, 51094.
 punching holes on magnetic tapes, apparatus for, see Shearing, etc.
 Rivetting. 48064.
 Rolling. 51556, 51735, 51736, 52797.
 rotary burring tools, see Miscellaneous.
 Screwing and tapping. 46690, 47045, 51555.
 Seaming. No case.
 shaping bevel gear teeth, see Planing, etc.
 Shearing and punching. 46690, 52093, 52547.
 shot-peening of metal surfaces, see POLISHING, ETC.
 slotting, see Planning, etc.
 Soldering. 46650, 46749, 48804, 49539, 50951, 50952, 51532, 53411.
 Stamping and embossing. 52475.
 stranding cables, plant for, see Bending.
 swaging, see Forging.
 templates, see Miscellaneous.
 Turning. 48547, 49283, 50936, 50945, 51559, 52563, 53412.

METAL WORKING.—contd.

Welding. 46570, 46582, 46635, 46675, 46850, 46914, 47125, 47422, 47569, 47710, 48012, 48728, 48819, 48847, 49221, 49338, 49642, 49840, 50206, 51136, 51356, 51638, 51751, 51871, 51872, 52260, 52384, 52395, 52546, 52913, 53411, 53438.

well casings, perforating, *see* Miscellaneous.

winding wires round tubes pipes and other bodies, *see* Bending.

Metallic powders, moulding, *see* MOULDING, ETC.

Metallic surfaces cleaning by shot peening sand blasting and like methods, *see* POLISHING, ETC.

Metallic surfaces, incrustations removing from, *see* INCRUSTATIONS, ETC.

Metallic vapours, condensing, *see* METALS EXTRACTING, ETC.

Metalliferous azo-dyestuffs, *see* CARBON COMPOUNDS, ETC.

Metals, casting, *see* CASTING, ETC.

Metals, cleaning and pickling by electrolysis, *see* ELECTROLYSIS, ETC.

Metals coating with metals otherwise than by electrolysis, *see* TINNING, ETC.

Metals coating with phosphate compositions, *see* TINNING, ETC.

Metals depositing on articles by electrolysis, *see* ELECTROLYSIS, ETC.

Metals distilling and condensing, *see* METALS EXTRACTING, ETC.

Metals electrolytic production of, *see* ELECTROLYSIS, ETC.

METALS, EXTRACTING AND REFINING (EXCEPTING IRON AND STEEL MANUFACTURE AND ORES, TREATING.) XXXIII(7).

(Process and apparatus for obtaining oxides hydrates, oxyacids and salts from which metal is stated to be obtained by unspecified or by known methods are indexed only under CHEMICAL COMPOUNDS, etc. Steps in processes for the treatment of Ores involving improvements in connection with drying grinding, mixing, roasting, sifting and washing are indexed under headings denoting such operations.)

Amalgamating and extracting metals by mercury. No case.

METALS, EXTRACTING, ETC.—contd.

condensing metallic vapours, *see* Distilling.

Condensing zinc metal from gases, *see* DISTILLING, etc.

crucibles and melting pots, *see* Miscellaneous.

Cyaniding. 46647.

Distilling. 48612, 49218, 51407, 51604, 51695, 51827, 52795, 52829.

Dry processes of extraction, other than distilling and refining. 47110, 47690, 48460, 48672, 48811, 49794, 49992, 50358, 51695, 52790.

extracting nickel as ferro-nickel alloy directly from ores, *see* ALLOYS.

leaching solutions, *see* Wet processes, etc.

Liquating. No case.

metals recovering from alloys, *see* Refining, etc.

Addition agents for non-ferrous molten metals. 52392.

Decomposition of nitrates. 51991.

Forming shaped bodies by reducing powdered metallic oxides and hot-working. 50795.

Metal extracting by reduction smelting of ores. 48427, 50233, 50598, 52545.

Smelting ores in blast furnace. 50094, 51071, 51319, 53420.

Miscellaneous—

nickel recovering from spent catalysts in the form of formate or acetate, *see* CARBON COMPOUNDS, ETC.

ores smelting in blast furnaces for extracting metal from, *see* Miscellaneous.

oxides, reducing with carbonaceous materials, *see* Dry processes, etc.

Refining (including recovering tin and other metals from scrap but excluding processes which form part of extraction).

46949, 47749, 48677, 49285, 49559, 49711, 49731, 51229, 53018, 53386.

removing adhering salts from, *see* Refining, etc.

METALS, EXTRACTING, ETC.—contd.

separation of metal or metals from alloys, *see* Refining, etc.

Thermo-aluminic and like mixtures and metals extracting processes.

No case.

Wet processes (other than cyaniding and amalgamating).

46644, 46648, 48157, 48708, 48810, 49060, 49131, 49341, 49457, 49943, 50847, 50923.

Metals, extracting by electrolytic processes, *see* ELECTROLYSIS, ETC.

Metals, modifying physical characters of, *see* ANNEALING, ETC.

Metals, obtaining and depositing by electrolysis, *see* ELECTROLYSIS, ETC.

Metals refining by electrolysis, *see* ELECTROLYSIS, ETC.

Metals, soldering, *see* METAL WORKING.

Metering arrangements for telephone circuits, *see* TELEPHONES, ETC.

Metering devices for lubricating distributing system, *see* LUBRICATING.

Meters, electric, *see* MEASURING AND TESTING, ETC.

Methyl styrene, *see* CARBON COMPOUNDS, ETC.

Methyl melamine condensation products, *see* CARBON COMPOUNDS, ETC.

Mica flakes, *see* INDIA RUBBER, ETC.

Micro-organisms cultures, *see* DISINFECTING, ETC.

Micro-organisms culturing, *see* DISINFECTING, ETC.

Microphones, *see* TELEPHONES, ETC.

Microphotometer, *see* PHILOSOPHICAL, ETC.

Microscopes, *see* PHILOSOPHICAL, ETC.

Micro-wave transmission systems, *see* WIRELESS, ETC.

Milk, preserving, *see* FOOD, ETC.

Milk, sterilizing, *see* FOOD, ETC.

Milking, machine, *see* ANIMALS, ETC.

Milling or grinding grain to produce flour, *see* GRINDING, ETC.

Milling or mixing, masticating and mechanically working plastic materials, *see* MIXING, ETC.

Mills, grinding, *see* GRINDING, ETC.

METALS, EXTRACTING, ETC.—concl'd.

Mine winders, electrical remote control systems for, *see* ELECTRIC SIGNALING, ETC.

Mines, land, *see* AMMUNITION, ETC.

MINING, QUARRYING AND WELL SINKING. XXVIII(3).

bore-holes, apparatus for measuring angles of inclination of, *see* PHILOSOPHICAL, ETC.

bore-holes, tools for taking samples therefrom, *see* Miscellaneous.

Boreholes, wells, shafts and tannels—

Linings, tubings and the like.

48566, 52767, 52805.

Miscellaneous—

Apparatus for removal of debris or carrying like operation in cased and tested wells. 52805.

Roofing support.

49866, 49867, 49868, 50086.

Tools for taking samples for bore holes. 47625.

Wells (other than linings).

46812, 48393, 50870, 51323, 51373.

Boring earth and rock—

Cores, rods and tubes, extracting and the like. No case.

Drills, other than rotary.

48477, 48505, 48852, 49350, 49897, 52192, 52662, 53279, 53409.

Miscellaneous—

Flush boring device. 49722.

Soil sample extracting devices.

52105.

Rotary drills. 46977, 47088, 47562, 47665, 48214, 48242, 49010, 49350, 50584, 50897, 52462, 52553, 53279.

brakes of mine windows, *see* BRAKES, ETC.

drill bits, *see* Boring, etc.

drilling earth and rock, *see* Boring, etc.

MINING, QUARRYING, ETC.—contd.

hydraulic feeding systems for hydraulic cable-tool drills, *see* **HYDRAULIC PRESSES, ETC.**

hydraulic mining, *see* **EXCAVATING.**

hydraulic roof support for mines, *see* **Bore-holes, etc.—(Miscellaneous).**

loading and unloading conveyances for mines, *see* **LIFTING, ETC.**

Mines and quarries. No case.

oil well pump cleaners, *see* **PUMPS, ETC.**

rock drills, lubricating, etc., *see* **LUBRICATING.**

roof supports for mines, *see* **Bore holes, etc.—(Miscellaneous).**

rotary drills, *see* **Boring earth and rock, etc. (Rotary drills).**

thrust borers, *see* **Boring etc.—(Drills, etc.).**

washers for mines roof bolts, *see* **BOLTS, ETC.**

well casings, perforating, *see* **METAL WORKING.**

Mirrors and like reflectors, *see* **PHILOSOPHICAL, ETC.**

MIXING AND AGITATING MACHINES AND APPLIANCES. XXXIV(3).

(Mixing and agitating apparatus for interest only as a part of apparatus for other purposes is indexed only under headings for such apparatus.)

This headings does not include CENTRIFUGAL MACHINES; INJECTORS; Carburettors (INTERNAL COMBUSTION ENGINES); SPRAY PRODUCERS; and VALVES).

Batch mixers (i.e., non-continuous discharge apparatus for solid and liquid materials)—

Moving containers. 48842.

Stationary containers. 49963, 51442, 52125.

churning or whisking machine, *see* **Miscellaneous.**

Continuous discharge apparatus—

Moving containers. No case.

Stationary containers. 46506, 48062, 48368, 48637, 49732, 52285, 52541.

MIXING AND AGITATING MACHINES AND APPLIANCES, ETC.—contd.

milling continuously plastic materials, *see* **Continuously, etc. (Stationary, etc.).**

Miscellaneous—

Blending liquids. 50779.

Mixing liquids of different phases. 52248.

Stirring with a smooth surface. 47664.

Whisking machine. 46544.

Mixing fluids or solids with fluids in proportionate quantities.

47527, 48207, 52574.

supplying substances in mixing machines in definite proportions, reciprocating pumps for, *see* **PUMPS, ETC.**

Mixing fibres, *see* **SPINNING, ETC.**

Models and like educational appliances, *see* **BOOKS, ETC.**

Models or toys, *see* **GAMES, ETC.**

Modulating carrier waves, *see* **WIRELESS, ETC.**

Molasses, purifying, *see* **SUGAR, ETC.**

Mono ammonium phosphate, *see* **CHEMICAL COMPOUNDS, ETC.**

Monopumps, *see* **ROTARY ENGINES, ETC.**

Monorail systems, *see* **RAILWAY, ETC. PERMANENT, ETC.**

Monotrizole, *see* **CARBON COMPOUNDS, ETC.**

Moorings for ships, *see* **SHIPS, ETC.**

Morphine derivatives, *see* **CARBON COMPOUNDS, ETC.**

Morphine derivatives, *see* **CARBON COMPOUNDS, ETC.**

Motor vehicles body details of, *see* **ROAD VEHICLES.**

MOTOR CONTROL SYSTEMS AND MOTOR AND LIKE CONTROLLERS. ELECTRIC. LIX(3).

asynchronous motors operating synchronously, *see* **Motor controlling, etc.**

control of poly-phase motors, *see* **Motor controlling, etc.**

MOTOR CONTROL, ETC.—contd.

- controlling circuit of electric motor, see Motor, etc.
- Motor controlling systems (other than construction of regulators). 46661, 46662, 46798, 47566, 47918, 47935, 48196, 48453, 48463, 48768, 48800, 48892, 49331, 49575, 49728, 49970, 50098, 50157, 50195, 50291, 50441, 50675, 50831, 50971, 51061, 51205, 51325, 52661, 52763, 52974, 53040, 53221, 53379.
- regulator switches for fans, see Starters, etc.
- servo motor, adapting for actuating speed controllers, see Motor controlling, etc.
- Starters and regulators, constructions of. 47937, 48050, 49835, 50396, 51344.
- ward-leonard system of control, see Motor controlling, etc.
- Motor cycles, see MOTOR VEHICLES.
- Motor fuels, see FUEL, ETC.
- Motor saws for cutting tubular shells of insulating and like materials, see WOOD CUTTING, ETC.
- Motor starters, see MOTOR CONTROL, ETC.
- Motor vehicle brakes, see BRAKES, ETC.
- Motor vehicle, doors and windows weather excluders of, see DOORS AND WINDOWS.

MOTOR VEHICLES. LH(1).

- antiskid control of brakes, see BRAKES, ETC.
- Arrangement and disposition of parts not otherwise provided for. 47480, 47627, 48651, 49179, 49587, 50197, 51480, 52113, 52198, 52199, 52200.
- automatic speed control device for motor cycles, see Driving, etc.
- axles tractors, see Frames, etc.
- axle suspensions, see Frames, etc.
- body details, see ROAD VEHICLES.
- brakes for motor vehicles, see BRAKES, ETC.
- chassis, construction of, see Frames, etc.
- clutches, arrangement and disposition of, see Arrangement, etc.

MOTOR VEHICLES.—contd.

- control systems, see Steering, etc.
- doors and windows, construction of, see DOORS AND WINDOWS, ETC.
- doors and windows, means for operating, see DOOR AND GATE, ETC.
- Driving transmission balance and reversing gearing, arrangement and disposition of. 46466, 46736, 46753, 46837, 48282, 48601, 49390, 50290, 51272, 51671, 52007, 52179, 52238, 52592, 53138.
- drop head for motor car bodies, see ROAD VEHICLES.
- Frames and under carriage work. 46464, 46465, 46736, 48013, 48147, 48282, 48680, 48882, 48960, 49182, 49343, 49705, 49979, 50242, 50289, 51474, 51578, 51743, 53139, 53181, 53460.
- gear box arranging and mounting on motor cycles, see Arrangement, etc.
- handle bars for motorcycles, see CYCLES, ETC.
- hoisting crane, mounting on motor vehicles, see LIFTING, ETC.
- hydraulic jacking systems to lift motor hoods, see HYDRAULIC PRESSES, ETC.
- kick starter for motor cycles, see Arrangement, etc.
- link work for internal combustion engine accelerator systems, see Arrangements, etc.
- pedal assembly for auto cycles, see CYCLES, ETC.
- power transmission gearing, construction of, see MECHANISM MISCELLANEOUS.
- power transmission systems, arrangement of, see Driving, etc.
- resilient suspension for axle assembly, see ROAD VEHICLES.
- resilient torsion joints and suspension system for chassis, see Frames, etc.
- shock absorbers, see SPRINGS, ETC.
- snow and insect deflector devices or attachments for motor cars, see ROAD VEHICLES.
- Steering and controlling. 46463, 46494, 46753, 46754, 48330, 48680, 49037, 52008, 52399.
- telescopic forks for motor cycles, see CYCLES, ETC.

MOTOR VEHICLES.—contd.

- transmission gearing arrangement and disposition of, *see* Driving, etc.
- transmission gearing construction of, *see* MECHANICAL MISCELLANEOUS.
- vehicle axle suspensions, *see* Frames and etc.
- weather excluders for motor vehicle door and windows, *see* DOORS AND WINDOWS, ETC.
- wheel axle suspension systems for motor vehicles, *see* Frames, etc.
- wheel bases, *see* Frames, etc.
- wheel suspensions, *see* Frames, etc.
- Motor vehicles, body construction of, *see* ROAD VEHICLES, ETC.
- Motors, electric, *see* DYNAMO-ELECTRIC, ETC.
- Motors, gaseous pressure actuated, *see* HOT-AIR, ETC.

MOTORS (MISCELLANEOUS) LXV(2).

(This heading includes animal power engines and miscellaneous types of motors such as self-driving machines; spring, weight and momentum power storing apparatus; and motors operated by variations in atmospheric temperature. Windmills and wind motors are indexed under TURBINES.)

- 48005, 48531.
- Motors, liquid pressure actuated, *see* HYDRAULIC PRESSES, ETC.
- Mould making machines, foundry, *see* CASTING, ETC.
- Moulding glass beads, *see* GLASS, ETC.
- Moulding machines, foundry, *see* CASTING, ETC.
- Moulding mixtures, for foundry, *see* CASTING, ETC.
- Moulds, foundry, *see* CASTING, ETC.

MOULDING PLASTIC AND POWDERED SUBSTANCES. XIII.

- applying pressure to surface of concrete articles, *see* Miscellaneous, etc.
- briquette press for coal ores and the like, *see* Miscellaneous.
- building blocks, moulding, *see* Miscellaneous.
- Casting with non-metallic liquids or flowing paste. 49531, 49908, 52112.

MOULDING, ETC.—contd.

- cellular articles of clay, moulding, *see* Miscellaneous, etc.
- Centrifugal and rotary machines for moulding (including other machines and processes for making pipes and tubes). 47354, 49124, 49135, 49232, 49317, 49654, 51457, 51548, 51618, 52139, 52832, 53387.
- concrete building structure, casting *in situ*, *see* BUILDING, ETC.
- configurations and dimensions of moulded concrete articles modifying or rectifying, *see* Miscellaneous.
- crores for moulding, *see* Moulds.
- concrete pipes, applying pressure to surface during construction, *see* Centrifugal, etc.
- cutting plastic bodies, *see* Miscellaneous.
- Extrusion machines. 46942, 48074, 48406, 48931, 48932, 48997, 49044, 49348, 49634, 49753, 51244, 52305, 52356, 52736, 52858, 53008.
- feed mechanism for moulding presses, *see* Miscellaneous, etc.
- fibrous cement sheets forming, *see* Pulp, etc.
- India rubber, processes and apparatus for moulding, not covered by other sub-divisions. 46627, 46872, 46939, 47120, 48932, 50073, 50165, 50986, 51932.
- injecting thermoplastic materials in crores, *see* Miscellaneous, etc.
- injection machines for, *see* Miscellaneous, etc.
- injection moulding machine, *see* Miscellaneous, etc.
- Miscellaneous processes and apparatus—
 - Abrasive articles making by cold moulding. 48456, 49199, 49344, 49464, 52730.
 - Cellular materials of clay moulding. 52331.
 - Coal, coke and ore powders, moulding. 53420.
 - Configuration and dimensions of moulded concrete articles modifying or rectifying. 49436.
 - Cutting plastic bodies. 47041.
 - Door pannels of plastic materials, forming. 50619.

MOULDING, ETC.—contd.**Miscellaneous, etc.—Contd.**

- Foam processes for making sheets.
49522.
- Hollow articles of organic plastic materials blowing. 49367, 50000.
- Injecting plastic materials in moulds.
47507, 49377, 49517, 50409.
- Moulding articles from coconut shell and like resinous compositions.
47412, 49522.
- Moulding by high frequency electric heating.
49861.
- Moulding cellular bodies. 46502, 49985, 52736.
- Moulding collars on nozzles. 48401.
- Moulding concrete and other building blocks.
49762, 51989.
- Moulding metal powders. 48154, 51693.
- Moulding or shaping bodies of powdered metallic oxides. 50795.
- Moulding plastic hollow articles.
46985, 50485, 51976.
- Moulding plastic materials.
46603, 46627, 47977, 48018, 48086, 49043, 49096, 49136, 49137, 50051, 50280, 51765, 51929.
- Moulding pulverulent wax. 47404.
- Moulding refractory bricks by dies.
53433.
- Moulding sand with resin. 51156.
- Moulding sealing pads for bottle closures and other closure seals.
51757, 51758, 51762, 51763, 51931, 51932, 51933, 51948.
- Patterns moulding. 53421.
- Pellets making. 49914, 53344.
- Plastic material deformed under pressure. 52888.
- Stretching thermoplastic tubes. 51047.
- Tablets making. 53439.
- moulded articles from silicon nitride, *see* Miscellaneous, etc.
- moulding cellular articles, *see* Miscellaneous, etc.
- moulding combs, *see* Miscellaneous, etc.
- moulding elastomeric compositions, *see* Miscellaneous, etc.

MOULDING, ETC.—contd.

- moulding India rubber, *see* India rubber, etc.
- moulding, thermoplastic materials, *see* Miscellaneous, etc.
- moulding sealing pads for closure seals, *see* Miscellaneous, etc.
- moulding sheets or boards from comminuted and decayed wood, *see* Pulp, etc.
- Moulds. 46565, 46845, 47041, 47120, 47339, 47512, 47934, 47977, 48072, 48407, 48845, 49762, 50267, 50485, 50633, 51989, 52141, 52604, 53164, 53421, 53430.
- Phonograph records, processes, and apparatus for not covered by other sub-divisions. 52976.
- pipes and tubes, moulding, *see* Centrifugal, etc.
- polyacrylonitrile containing articles, manufacture of, *see* Miscellaneous, etc.
- Presses, mechanical. 47142, 47404, 47934, 48047, 51183, 53133, 53226, 53227.
- Pulp, process and apparatus for moulding not covered by other sub-divisions. 46564, 46934, 46998, 47317, 47411, 48793, 49441, 51940, 52108.
- Shaking, jiggling and tamping machines.
47117, 48957.
- Shaping by rollers. 46658, 48869, 50422.
- Sizing extruded thermoplastic cable cores, *see* Extrusion, etc.
- Spreading by pressure against moving or fixed formers (plunger-operated).
46976, 48976.
- stretching thermoplastic tubes, *see* Miscellaneous, etc.
- tablets, making, *see* Miscellaneous, etc.
- tyre covers, moulds for making, *see* Moulds.
- Wheel tyres (process and apparatus for making not covered by other sub-divisions). 48407, 52604.
- wooden boards making from powdered wood, *see* Pulp, etc.

MOULDING, ETC.—concl'd.

Moulds and cores for casting metals, *see* CASTING, ETC.

Moulds, foundry, *see* CASTING, ETC.

Mouth washes, *see* DISINFECTING, ETC.

Mowing machines, *see* AGRICULTURAL, ETC.

Mules for spinning, *see* SPINNING, ETC.

Multichannel carrier systems, telephones, *see* TELEPHONES, ETC.

Multichannel telephone systems, *see* TELEPHONES, ETC.

Multi-colour printing, *see* PRINTING.

Multiply fabrics, *see* PROOFING, ETC.

MUSIC AND MUSICAL INSTRUMENTS. LX(2).

Miscellaneous musical instruments. 48607, 52962.

Music. No case.

Organs, harmoniums. No case.

Pianos. No case.

striking device for stringed instruments, *see* Stringed instruments, etc.

Stringed instruments (excepting pianos). 48353, 52962.

Time indicators, musical. No case.

Wind instruments (excepting organs and like). No case.

N**NAILS, HOOKS, COTTERS, PINS, STAPLE WEDGES AND WOOD SCREWS. LXIV(6).**

Cotters, gibs and pins for cottering. 52302.

Hooks. No case.

Miscellaneous—

Pins or studs with fuge wire. 53411.

Nailing, stapling and wire-stitching. 46559, 46572.

Nails, spikes, tacks and woodscrews. 51157, 51230, 51801, 52302, 52608.

spikes, *see* Nails, etc.

Wedges. No case.

NAILS, HOOKS, ETC.—cont'd.

wedges or chain keys for railway permanent way systems, *see* RAILWAY, ETC., PERMANENT WAY, ETC.

wire stitching machines, *see* Nailing etc.

Napkins, sanitary, *see* MEDICAL, ETC.

Natural and synthetic rubber, *see* INDIA RUBBER, ETC.

Neck bearings, *see* BEARING, ETC.

Net works, electrical, *see* TELEGRAPHS, ETC.

Nets, fishing, *see* FISH, ETC.

Neutron generating and detecting apparatus, *see* CHEMICAL PROCESSES, ETC.

Nickel, extracting from ores directly in the form of an alloy, *see* ALLOYS.

Nickel formate or acetate, *see* CARBON COMPOUNDS, ETC.

Nicotine, *see* CARBON COMPOUNDS, ETC.

Nicotinic acid and its derivatives, *see* CARBON COMPOUNDS, ETC.

Nimpidin nimbin or nimbinin, *see* CARBON COMPOUNDS, ETC.

Nipples for feeding bottles, *see* STOPPERING, ETC.

Nipples for lubricating, *see* LUBRICATING.

Nitrates, *see* CHEMICAL COMPOUNDS, ETC.

Nitric acid, *see* CHEMICAL COMPOUNDS, ETC.

Nitriles, *see* CARBON COMPOUNDS, ETC.

Nitro acetal, *see* CARBON COMPOUNDS, ETC.

Nitro dyes, *see* CARBON COMPOUNDS, ETC.

Nitrophenanthrene quinone, *see* CARBON COMPOUNDS, ETC.

NON-METALLIC ELEMENTS. IV(2).

Carbon, charcoal and graphite.

46553, 46889, 47932, 48385, 49729, 50493, 50845, 51165.

Elements other than carbon halogens, hydrogen, nitrogen, oxygen and sulphur. No case.

Halogens. No case.

Hydrogen. 49138, 49812, 52478.

Nitrogen. No case.

NON-METALLIC, ETC.—contd.

- Oxygen and Ozone. 49138.
- Sulphur. 47257, 47999, 48756, 49025, 49635, 50258, 51611, 52001, 52381.
- Nozzle fittings in spraying equipments, see **SPRAY PRODUCERS, ETC.**
- Nozzles for spinning yarns, see **CELLULOSE, ETC.**
- Nutrient compositions for plants, see **MANURES, ETC.**
- Nuts, seeds, fruits or the like shelling, see **GRAIN, ETC.**

O

- Octahydro-naphthyl methane derivatives, see **CARBON COMPOUNDS, ETC.**
- Offset printing plates, see **PRINTING.**
- Oil cakes treating for preparing food stuffs, see **FOOD, ETC.**
- Oil circuit breakers, electric, see **ELECTRIC SWITCHES, ETC.**
- Oil cleaners centrifugal, see **CENTRIFUGAL MACHINES, ETC.**
- Oil extracting machines, see **FATS, ETC.**
- Oil fuel, see **FUEL MANUFACTURE.**

OILS AND LUBRICANTS. XI(2).

(Steps in processes for the production of oils involving improvements in connection with cooling, distilling, filtering, heating and mixing are indexed under headings denoting such operations.)

catalytic hydrogenation of oils, see **DISTILLING, ETC.**

Lubricants—

Lubricants for fibres and unclassified. 49140.

Lubricants for machinery.

46816, 47097, 47273, 47506, 48462, 49140, 49456, 49491, 50029, 51092, 51607, 51963, 52349, 52574, 52660, 52724, 52839, 52965, 53010.

lubricating oils, see **Lubricants (Lubricants for machinery).**

Oils (excepting fats and fatty oils and oils for fuel and motive power purposes and lubricants)—

Compositions and modified oils (other than for lubricating.)

47808, 49140, 51310.

Extracting. 47540.

OILS AND, ETC.—contd.

- Purifying. 46554, 47240, 47687, 47931, 48099, 48234, 48351, 48511, 48660, 48661, 48742, 50440, 52697, 53213.
- removing gum forming component fire, see **Oils, etc. (Purifying, etc.).**
- Oils fatty, refining of, see **FATS, ETC.**
- Oils, fish, or vegetable, extraction or purification of, see **FATS, ETC.**
- Oils, vegetable, refining, see **FATS, ETC.**
- Olefines, see **CARBON COMPOUNDS, ETC.**
- Omega mycin, see **CARBON COMPOUNDS, ETC.**
- Open hearth furnaces, see **FURNACE, ETC.**
- Operation table, see **FURNITURE.**
- Ophthalmic lenses, see **SPECTACLES, ETC.**
- Optical filters, see **PHILOSOPHICAL, ETC.**
- Optical instruments, see **PHILOSOPHICAL, ETC.**
- Optical projection screens stereoscopic effects producing, see **PHILOSOPHICAL, ETC.**
- Optical projectors, see **PHILOSOPHICAL, ETC.**
- Optical refracting systems, see **PHILOSOPHICAL, ETC.**
- Optical systems, see **PHILOSOPHICAL, ETC.**
- Optical viewing devices, see **PHILOSOPHICAL, ETC.**
- Optically projecting television pictures on screens, see **PHILOSOPHICAL, ETC.**
- Ores, concentrating by electro-magnetic separation, see **MAGNETIC, ETC.**
- Ores, concentrating by flotation processes, see **WASHING GRANULAR, ETC.**
- Ores, reducing and extracting metals from, see **METALS EXTRACTING, ETC.**
- ORES, SLIMES AND MINERAL RESIDUES, TREATING (BRIQUETTING, CHLORINATING, ROASTING AND LIKE PROCESSES). XXXIII(8).**
- (This heading is not exhaustive of all processes of treating ores, but is limited to processes as defined by the terms of the sub-headings.)*
- Briquetting and other agglomerating processes. 47527, 47899, 49148, 49277, 51223, 51910, 53344, 53420.

ORES, SLIMES, ETC.—contd.

Chlorinating, chloridising and like processes. 52363.

Deoxidising, dephosphorising processes for removing undesired constituents from ores, prior to extraction. 51206, 51909.

fuging and rapidly drilling, see **Miscellaneous.**

Miscellaneous—

Diaggregation of ores. 49123.

Magnetic separation of ores. 51625.

Ores and stones cleaning. 51441.

Preparing acid-soluble manganese product from ore or slag. 52981.

Open-pan roasting and sintering processes and apparatus. 47527, 47899, 53372.

Sulphatising, sulphidising processes.
No case.

Ores, smelting for extracting metal, see **METAL EXTRACTING, ETC.**

Organic compounds, see **CARBON COMPOUNDS, ETC.**

Organic compounds separating by azeotropic distillation, see **DISTILLING, ETC.**

Organic esters, see **CARBON COMPOUNDS, ETC.**

ORNAMENTING. LXVI(6).

49455, 50865.

glass, ornamenting by operations involving firing, see **GLASS, ETC.**

Ornamenting glass, see **GLASS, ETC.**

Oscillation generators, electric see **WIRELESS, ETC.**

Oscillators, electric, see **WIRELESS, ETC.**

Overhead conductors, supporting, see **CONDUCTORS, ETC.**

Overshoes, see **BOOTS AND SHOES.**

Oxazoline derivatives, see **CARBON COMPOUNDS, ETC.**

Ox-diazole compounds, see **CARBON COMPOUNDS, ETC.**

ORNAMENTING—contd.

Oxides hydrates, oxyacids and salts, metallic, see **CHEMICAL COMPOUNDS, ETC.**

Oximes, see **CARBON COMPOUNDS, ETC.**

Oxo-synthesis, see **CARBON COMPOUNDS, ETC.**

Oxy-acetylene torches, see **BURNERS, ETC.**

Oxyacids, non-metallic, see **CHEMICAL COMPOUNDS, ETC.**

Oxygen administering apparatus, see **MEDICAL, ETC.**

P

P-N junctions, see **WIRELESS, ETC.**

Packages flexible and the like, see **BAGS, ETC.**

Packages of yarns and threads, see **SPINNING, ETC.**

Packing, see **PACKING, ETC.**

Packaging of yarns, see **SPINNING, ETC.**

PACKING AND BAILING. XL(5).

Bailing presses. 50223.

Bales. No case.

Bale-ties, bale-tie fasteners, and strainers (wire, cord, strap and rod type) 50635, 51282, 53341.

bands, packing, see **Bale-ties, etc.**

filling receptacles with powdered material, see **Packing, etc. (Granular, etc.)**

Packing and wrapping up for transit and storage—

Articles packeting singly or collectively in formed receptacles (including preliminary assembly and arrangement). 49255, 52177, 52613, 52975, 53088.

Granular; plastic and powdered materials, packeting in formed receptacles. 46773, 50126, 50127, 50128, 52095.

Materials and goods making up into special packages and parcels. 46552.

PACKING, ETC.—contd.

Packing and wrapping up for transit, etc.—contd.

Miscellaneous—

Packing spring assemblies. 51839.

Packeting by wrapping up in bags, sheets and blanks.

50146, 52177.

Parcelling by building, machines and apparatus for.

No case.

Unpacking. No case.

wrapping bars of chocolate apparatus, for, see Packing, etc. (Articles etc.) 50126, 50127.

Packing cases or boxes, see BOXES, ETC. (52255).

Packing, joint making between relatively fixed members, see STEAM ENGINES, ETC. (53209).

Packing or leakage preventing means in centrifugal pumps, see CENTRIFUGAL AND, ETC.

Packing for rotary shafts, see STUFFING, BOXES.

Pading textile materials, see DYEING, ETC.

Padlocks, see LOCKS, ETC.

Pads cleaning, see BRUSHING, ETC.

PAINTS, PAINTING AND THE LIKE. XII(3).

(This heading does not include BITUMINOUS EMULSIONS; PLASTIC COMPOSITIONS; polishing compositions for furniture (see SOAPS, ETC.) and enamels and glaze (see GLASS MANUFACTURE).)

Coating and painting surfaces (other than those of continuous lengths of flexible materials in open condition).

46935, 47888, 48419, 49191, 49654, 50920, 51104, 51812, 51984, 52139, 52642.

Coating compositions, non-drying and non-setting and compositions applied melted.

47772, 50556, 52687.

devices for applying paints on surfaces, see Coating, etc.

Luminous paints and compositions. 48627, 50497.

Paints and varnishes, removing. 47352.

PAINTS, ETC.—contd.

Paints, varnishes and other coating compositions, drying by exposure other coating compositions, drying by exposure other than luminous paints—

Distempers and water paints. 48649, 49856, 53287.

Miscellaneous—

Composition containing metal powder. 48415.

Compositions containing enamel with refractory material. 47504.

Lacquers. 48995, 51151.

Paints, making. 50497, 51640.

Varnish. 48514.

Paints containing carbohydrates, cellulose, and India rubber and like gums. 47815.

Paints containing oils, fats, soaps and resins (natural and synthetic) and waxes.

46629, 46821, 47098, 47815, 47852, 47853, 48415, 48419, 48493, 48514, 48995, 49365, 49773, 49927, 49934, 50294, 50442, 50443, 51887, 51945, 51992.

Paints (other than distempers) containing asphalts, bitumens, tars and pitches. 49729.

Pigments.

47409, 48093, 48169, 48796, 49265, 50703.

Paints, removing by abrasive blasting, see POLISHING, ETC.

Palladium catalyst, see CHEMICAL PROCESSES.

Panels and panelled work, see BUILDING, ETC.

Pans, baking, see HOLLOW-WARE.

PAPER. XXIV(4).

bagasse digesting with alkali, see Pulp, etc. (Processes using etc.)

cellulose, preparing by alkaline digestion, see Pulp, etc. (Processes using alkali).

cellulosic materials, digesting, see Pulp, etc. (Processes, etc.)

Materials, fibrous. 49909.

Miscellaneous—

Creasing paper and paper boards. 47351.

Optical brightening of cellulose fibres. 53145.

PAPER—contd.

- Miscellaneous—*contd.*
- Sizing. 50827.
- Sodium aluminate composition for making paper. 47820.
- Treating paper with emulsions. 50622
- Paper, boards and compound paper. 49423, 51179, 53039, 53084.
- Paper-machines and paper-forming apparatus. 47284, 50069, 51667, 51711.
- pulp grinding, *see* GRINDING, ETC.
- Pulp, preparation of—
- Apparatus (including pulping engines). 46928, 51400, 51581.
- Processes using alkali.
- 46638, 46689, 47241, 47524, 48905, 49054, 49190, 49233, 49909, 50428, 50775, 51434, 51850, 51869, 51937, 52413, 52695, 52696, 52703, 52714, 53222.
- Processes using substances other than alkalis. 46689, 46928, 47242, 49054, 49190, 52413, 53222.
- resin removing from sulphite pulp, *see* Pulp, etc. (Processes using, etc.)
- utilising exhausted liquor, *see* Waste, etc.
- Waste products, treatment and utilisation of. 46535, 46536, 46537, 49692.
- Paper and like strip materials, feeding devices for, *see* WEBS, ETC.
- Paper bags, *see* BAGS, ETC.
- Paper feeding devices for duplicating machine, *see* PRINTING.
- Paper feeding mechanism for duplicating machines, *see* PRINTING.
- Paper or like sheets feeding, *see* WEBS, ETC.
- Paper or tissue impregnating with resin, *see* PROOFING, ETC.
- Paper webs, coating, *see* PROOFING, ETC.
- Paper weights, *see* BOOKS, ETC.
- Papers and like sheets filing, *see* FILING, ETC.
- Para-amino salicylic acid, *see* CARBON COMPOUNDS, ETC.
- Paraffin waxes, *see* WAXES, ETC.
- Parallel running of electric generators, *see* ELECTRIC SUPPLY, ETC.
- Parchmentising, of textile materials, *see* DYEING, ETC.
- Partitions, *see* BUILDINGS, ETC.
- Paste for making electrodes, *see* PLASTIC, ETC.
- Patterns for use in making garments, *see* DRESS, ETC.
- Pectin extraction of, *see* ADHESIVES, ETC.
- Pedal attachment for cycles, *see* CYCLES, ETC.
- Pellets, making, *see* MOULDING, ETC.
- Pelton wheels, *see* TURBINES, ETC.
- Pencil sharpener, *see* WRITING, ETC.
- Penicillin, *see* CARBON COMPOUNDS, ETC.
- Penicillin compositions *see* DISINFECTING, ETC.
- Penicillin preparations, *see* DISINFECTING, ETC.
- Penicillin salts, *see* CARBON COMPOUNDS, ETC.
- Pentanal derivatives, *see* CARBON COMPOUNDS, ETC.
- Pentanoues, *see* CARBON COMPOUNDS, ETC.
- Peracids, *see* CHEMICAL COMPOUNDS, ETC.
- Perambulators, *see* ROAD VEHICLES.
- Percussion apparatus for rock breaking, *see* MINING, ETC.
- Perforating paper, instruments for, *see* CUTTING, ETC.
- Perforating webs, *see* CUTTING, ETC.
- Permanent magnets, *see* DYNAMO ELECTRIC, ETC.
- Permono sulphuric acid, *see* CHEMICAL COMPOUNDS, ETC.
- Persian wheels, *see* WATER, ETC., RAISING, ETC.
- Pessaries, *see* MEDICAL, ETC.
- Pest combatting agents, *see* DISINFECTING, ETC.
- Pesticidal agents, *see* DISINFECTING, ETC.
- Pesticidal compositions, *see* DISINFECTING, ETC.
- Petrol gas plants, *see* FUEL, ETC.
- Petroleum hydrocarbons stabilising to produce fuel oils, *see* CARBON COMPOUNDS, ETC.
- Petroleum oils, purifying, *see* OILS, ETC.
- Pharmaceutical compositions, *see* DISINFECTING, ETC.
- Pharmaceutical preparation, *see* DISINFECTING, ETC.

PAPER—Concl'd.

Phase relation of electrical quantities indicating apparatus, for indicating and measuring, see MEASURING AND, ETC.

Phase relation of radio waves, indicating, see MEASURING AND, ETC.

Phenacetin, see CARBON COMPOUNDS, ETC.

Phenanthridine compounds, see CARBON COMPOUNDS, ETC.

Phenols, catechols and like, see CARBON COMPOUNDS, ETC.

Phenols, para-amino, preparing electrolytically, see ELECTROLYSIS, ETC.

Phenothiazine derivatives, see CARBON COMPOUNDS, ETC.

Phenothiazines, see CARBON COMPOUNDS, ETC.

Phenoxy-alkane-carbonic acids, see CARBON COMPOUNDS, ETC.

Phenthiazine, see CARBON COMPOUNDS ETC.

Phenyl sulphones, see CARBON COMPOUNDS, ETC.

Phials or bottles, see BOTTLES, ETC.

PHILOSOPHICAL INSTRUMENTS. XXXVIII(2).

(This heading includes surveying, navigational astronomical instruments, and thermometers, meteorological and mathematical instruments and miscellaneous physical apparatus).

Angles, measuring levels, plumb rules and like. 49072, 52476.

binocular systems, see Optical, etc. (Systems, etc.)

colour felters, see Optical etc. (Miscellaneous)

electron microscope, see VACUUM, ETC.

epidiascopes, see Optical, etc. (Projection, etc.)

horizontal plane indicating optical instruments, see Optical, etc. (Miscellaneous).

hygrometers, see Miscellaneous, etc.

infra-red spectroscopes, see Optical, etc. (Miscellaneous).

interference coating optical, see Optical, etc. (Systems, etc.)

PHILOSOPHICAL INSTRUMENTS — contd.

lenses, optical, see Optical, etc. (Systems, etc.)

levels, see Angles, etc.

light reflecting and transmitting optical systems, see Optical, etc. (Systems, etc.)

Mathematical drawing appliances. No case.

microscopes, immersion oils for, see OILS, ETC.

mirrors or reflectors, optical see Optical, etc. (Systems, etc.)

Miscellaneous philosophical instruments—

Apparatus for measuring moisture content of hygroscopic materials. 49021.

Contour tracting. 53580.

Hygrometers. 51273.

Pendulums. 47733.

Seismic apparatus. 52377.

Optical apparatus—

Miscellaneous—

Colour filters. 46594, 47939.

Horizontal plane indicating optical instruments. 50001.

Infra-red spectroscopes. 47264.

Microphotometer. 47348.

Optical viewing devices. 52288, 52577, 52689, 52690.

Periscope for X-ray image amplifying tube. 48323.

Refractometer. 48730.

Seismic apparatus. 52377.

Projection apparatus, optical.

46659, 47000, 47034, 47420, 48926, 48961, 50123, 50190, 50390, 52857.

Systems or combinations of refracting and reflecting elements.

46573, 47034, 47053, 47204, 48233, 49301, 49814, 51998, 52206, 52857, 52935, 53369.

optical interference layers, see Optical, etc. (Systems, etc.)

optical system for forming images, see Optical, etc. (Projection, etc.)

optical viewing apparatus, see Optical, etc. (Miscellaneous)

optical viewing devices for use in X-ray image amplifiers, see Optical, etc. (Miscellaneous.)

PHILOSOPHICAL INSTRUMENTS —
contd.

picture projection apparatus, optical,
see Optical, etc. (Projection, etc.)

projection apparatus, optical, see Optical, etc. (Projection apparatus)

reflectors, optical arrangement of, see Optical, etc. (Systems, etc.)

refracting members, lenses, prism gem and like, see Optical, etc. (Systems, etc.)

refractometers, see Optical, etc. (Miscellaneous)

stereoscopic effects producing optical projection screen for, see Optical, etc. (Projection, etc.)

television projection apparatus using modulated light from controlled source, see TELEGRAPHS, ETC.

Thermometers and pyrometers. No case.

PHONOGRAPHS AND LIKE SOUND RECORDING AND REPRODUCING INSTRUMENTS. LX(3).

(This heading does not include sound measuring and locating.).

Cases and stands. No case.

cinematographic sound reproducing apparatus, see Working in association, etc.

Driving, speed regulating and indicating, starting and stopping.
51901, 52368.

Electric and magnetic machines, general design of.

47891, 47335, 48070, 48607, 49626,
49627, 50257, 50578, 51215, 51403,
51854, 51859, 51901, 52143, 52468,
52960, 52977, 53044, 53109, 53262.

electromagnetic sound heads, see Electric, etc.

friction drive mechanisms for tape and other recording machines, see MECHANISM MISCELLANEOUS.

magnetic recording and reproducing devices, see Electric, etc.

magnetic sound translating heads, see Electric, etc.

magnetic tape recorders and reproducers, see Electric, etc.

Mandrels and turntables. 47152, 48762.

PHONOGRAPHS AND LIKE, ETC.—
contd.

Miscellaneous. No case.

Multiple machines, mechanical, general design of. 47152, 50408.

optical sound reproducing cinema films, device for, see Working in association etc.

Optical systems of recording.
46999, 47141.

phonograph recorders, electric, see Electric, etc.

phonograph recorders, mechanical, see Records, etc.

record release mechanisms automatic, see Multiple, etc.

records, electric system for studying of, see Electric, etc.

Records, mechanical,
50257, 51215, 52145, 52975, 52976.

Sound boxes. No case.

sound heads, electromagnetic, see Electric, etc.

Sound magnifying, modifying and directing appliances. No case.

sound recording and reproduction, electric apparatus for, see Electric apparatus, etc.

sound recording apparatus optical, see Optical systems, etc.

sound recording magnetic reproducer device for, see Electric, etc.

sounds recording on films see Optical, etc.

spindle of construction of, see Mandrels, etc.

stereophonic sound reproduction from cinematographic films apparatus for, see Working, etc.

synchronising units for projectors and sound reproducers, see Working, etc.

Tone-arms. 50408.

transducer for recording, erasing and reproducing sound magnetically, see Electric, etc.

Working in association with cinematographs and musical instruments.

(Includes only systems or combinations of apparatus. Specified types of apparatus are indexed under various headings for such apparatus).

46999, 50190, 51724, 53044.

Phosphates inorganic *see* CHEMICAL COMPOUNDS, ETC.

Phosphates, metallic, *see* CHEMICAL COMPOUNDS, ETC.

Phosphoric acid, *see* CHEMICAL COMPOUNDS, ETC.

Phosphoric acid esters, *see* CARBON COMPOUNDS, ETC.

Photo-composing machines, *see* PHOTOGRAPHY.

Photo-copying devices, *see* PHOTOGRAPHY.

Photographic darkroom safelight, *see* LAMPS FOR LIGHTING, ETC.

Photographic flash lamps, magnesium and like, *see* BURNERS, ETC.

PHOTOGRAPHY. XXXVIII(3).

Automatic and coinfreed apparatus for taking and finishing photographs.

No case.

cameras for colour photography, *see* Colour, etc.

Cameras (including shutters).

46999, 47062, 47063, 47264, 49324,
50190, 50444, 50445, 51438, 51461,
51466, 51886, 51930, 52092, 52651,
52992, 53020.

Cinemetograph picture films and lantern slides. 46596.

coatings, light-sensitive layer for photomechanical production of printing surfaces, *see* Photomechanical, etc.

Colour photography.

46523, 46594, 46601, 47939, 47981,
48626, 49174, 49507, 49546, 50120,
50708, 50730, 50912, 51461, 52430,
52677.

compositions for use in manufacturing light-sensitive photographic materials, *see* Plates films, etc.

coping devices, *see* Enlarging, etc.

Dark rooms, studios and studio accessories. No case.

Developing and other chemical treatment (other than apparatus).
46601.

PHOTOGRAPHY.—*contd.*

emulsions for production of photographic materials, *see* Plates, films, etc.

Enlarging, copying and reducing.

47432, 50987, 53036.

films, printing pictures by inhibition on, *see* PRINTING.

filters used for colour photography, *see* Colour photography.

flash light attachment for cameras, *see* Cameras.

half-tone printing block, making of, *see* Photomechanical, etc.

intaglio printing moulds, *see* Photomechanical, etc.

light sensitive sheet feeding mechanisms for photo-composing machines, *see* Photographic type, etc.

Miscellaneous—

Photographic emulsions. 50483.

X-ray apparatus. 48323, 50424, 52288
52577, 52689, 52690.

paper and like transfer materials, *see* Plates, films, etc.

photo-copying accessories *see* Enlarging, etc.

Photographic type composing.

46573, 47374, 49028, 50367, 50853,
51738.

Photo-mechanical printing surfaces producing. 47025, 51372, 51898, 51979.

photomechanical typograph composing machines, *see* Photographic, etc.

Plates and films, auxiliary holders for (separate from camera). No case.

Plates, films and papers.

47658, 47659, 49667, 50483, 51540,
51541, 53382.

Printing, apparatus for. 46999, 50912.

recording indications on moving photographic film, means for, *see* Cameras.

shutter for cameras, *see* Cameras, etc.

stereograms apparatus for taking, *see* Cameras, etc.

stereoscopic cameras, *see* Cameras, etc.

Surveying, aeronautical, panoramic photography. No case.

PHOTOGRAPHY.—concl'd.

Trays, dishes and apparatus for developing, fixing, washing, etc. No case.

type setting or composing, photographic apparatus for, *see* Photographic type, etc.

x-ray photographic apparatus, *see* Miscellaneous.

Phthalazine derivatives, *see* CARBON COMPOUNDS, ETC.

Phthalazines, *see* CARBON COMPOUNDS ETC.

Phthalic acid and derivatives thereof, *see* CARBON COMPOUNDS, ETC.

Phthalocyanines, *see* CARBON COMPOUNDS, ETC.

Pickers for looms, *see* LOOMS.

Pickling and cleaning metals, otherwise than by electrolysis *see* INCRUSTATION, ETC.

Pictorial matters, applying to rubber, *see* INDIA RUBBER, ETC.

Pigments, *see* PAINTS, ETC.

Pile fabric looms, *see* LOOMS.

Pile fabrics producing by electrostatic method, *see* PROOFING, ETC.

PILES AND PILE DRIVING. XXVIII(4).

concrete piles, other than piles made by driving preparatory piles or shells.
No case.

Driving and withdrawing.

47438, 48281, 48313, 48920, 51621.

foundation pile screwing equipment, *see* Driving, etc.

Hoops, caps, saddles, shoes and screw-points. No case.

Miscellaneous. No case.

Piles made by driving preparatory piles or shells. 48312, 48543, 48544, 48545, 50908.

Sheet and other metal piling.

No case.

Pilferproof closures for bottle, or like containers, *see* STOPPERING, ETC.

Pill boxes, *see* BOXES, ETC.

Pins or cotters, *see* NAILS, ETC.

Pipes concrete, forming, *see* MOULDING, ETC.

Pipe connections, *see* PIPE-JOINTS, ETC.

Pipe couplings, *see* PIPE-JOINTS, ETC.

PIPE-JOINTS AND LIKE COUPLINGS. XLVIII(1).

(This heading does not include wire and rod couplings for which, *see* ELECTRIC COUPLINGS.)

Angle pieces, bends, crosses, elbows, tees and like junction pieces. 50750.

Ball and swivel joints. 48761.

couplings for grease guns and nipples, *see* LUBRICATING.

Couplings, hose and disconnectible.

47499, 47948, 48465, 48761, 49565, 52242, 52904, 52905, 53082, 53095.

end-connections for metal tubes, *see* Miscellaneous.

Formed by molten metal and by welding. 53303.

joint making packing, *see* STEAM ENGINES.

Joints, other than easily removable, packed or welded. 51501, 53178.

Joints, packed and caulked.

46634, 47779, 48253, 48820, 49877, 49958, 51905, 52242, 52277, 52904, 53178.

laying flexible conduits or pipes in trenches, *see* Miscellaneous.

metal tubes, forming fins on, by rolling, *see* METAL WORKING, ETC.

Miscellaneous—

End-connections for. 53175.

Plates, walls and other plane surfaces, joining tubes to. 50800.

releasable connections elastic sleeve connected by elastic sleeve, *see* Couplings, etc.

removable couplings, *see* Couplings, etc.

sealing devices for tubular housings, *see* Joints packed, etc.

spigot and socket joints with packing, *see* Joints, packed, etc.

wire and rod couplings, *see* ELECTRIC COUPLINGS.

Piperazine adipate, *see* CARBON COMPOUNDS, ETC.

PIPE-JOINTS, ETC.—contd.

Piperidines and piperidine derivatives, see CARBON COMPOUNDS, ETC.

Piperidiones, see CARBON COMPOUNDS, ETC.

Piperidyl alkyl ketones, see CARBON COMPOUNDS, ETC.

PIPES AND TUBES. XLVIII(2).

Cement and like pipes and tubes.

47551, 48551, 48552, 48553, 48845, 49102, 51457, 51548.

Cleaning. 46827, 46891.

coiling hoses, see Hoses, etc.

concrete pipes and conduits, see Cement, etc.

covering, corrosion-protective for metal pipes, see Metal pipes.

Hoses and other flexible pipes (including non-flexible, India rubber, gutta percha and leather pieces).

46649, 46985, 48028, 48478, 48724, 49622, 50366, 51779, 52358.

means for supporting and rotating concrete pipes, see Cement, etc.

Metal pipes and tubes.

46673, 47924, 47965, 47966, 47967, 48540, 50019, 51484, 52160, 52870.

metal pipes and tubes, making, see METAL WORKING.

Miscellaneous—

Laying flexible pipes or conduits in trenches. 52905.

Locking structure for restable culvert pipes. 47868.

Protective coverings for pipes. 46586, 47415, 49556.

Reinforcing and prestressing pipes. 51656, 51657, 52196.

oil well pump column cleaners, see PUMPS, ETC.

Pipes and tubes, not otherwise provided for. 48030, 48855.

plastic tubes and pipes, see Hoses, etc.

protective coverings for pipes, see Miscellaneous.

reinforcing or prestressing pipes by wires, see Miscellaneous.

reinforcing pipes by wound wires hoop or slings, see Miscellaneous.

PIPES AND TUBES.—contd.

Repairing, stopping leakages in and supporting pipes. No case.

tensioning reinforcements of concrete pipes, see Miscellaneous.

tubes and pipes of plastic material, see Hoses, etc.

Pipes and tubes, forming by moulding, see MOULDING, ETC.

Pipes, assembling or coupling, see PIPE-JOINTS, ETC.

Pipes making by moulding asbestos cement, see PIPES, ETC.

Pistols, see SMALL ARMS, ETC.

Pistons for engines, casting, see CASTING, ETC.

Pistons for reciprocating internal combustion engines, see STEAM ENGINES, ETC.

Pistons for reciprocating pumps, see PUMPS, ETC.

Planographic printing plates, see PRINTING.

Plant growth nutrient compositions for, see MANURES, ETC.

Plaster compositions, see CEMENT, ETC.

Plastering, see BUILDINGS, ETC.

Plasters, medical and surgical, see MEDICAL, ETC.

PLASTIC COMPOSITIONS. XII(2).

(This heading comprises mouldable compositions which usually set, compositions containing bitumen, resins, fats, oils and waxes and organic derivatives as important constituents are indexed here. India rubber compositions are indexed under INDIA RUBBER. Steps in processes for the production of plastic compositions involving improvements in connection with drying emulsifying, grinding, crushing and pulverising, mixing, and testing physical qualities are indexed under headings denoting such operations.)

Albumen, casein cellulose, dextrine, gelatine, glue, molasses, starch and sugar compositions, but not containing constituents stated below.

46929, 49892, 52027, 52028.

Bituminous compositions.

47224, 49014, 49729, 52448.

PLASTIC COMPOSITIONS.—contd.

coating compositions paints varnishes and like, see PAINTS, ETC.

Compositions containing clay, cement, porcelain and like, but not containing constituents stated above. 49092, 49394, 50558.

compositions containing cork or like fibrous materials, see Unclassified, etc.

Oils, fats, higher fatty acids, soaps and condensates from tar distillation compositions containing, but not bitumen, or resins, gums and waxes.

No case.

paste for making electrodes, see Unclassified, etc.

polystyrene and polyvinyl-acetate compositions, see Resins, etc.

polyvinyl chloride and starch composition see Albumen, etc.

Resins, resinsates, gums and waxes containing but not bitumen.

46728,	46803,	46982,	47043,	47101,
47131,	47387,	47412,	47812,	47852,
47853,	47976,	48690,	48935,	49043,
49159,	49272,	49522,	49531,	49621,
49723,	49921,	50051,	50137,	50185,
50608,	50714,	50848,	51101,	51511,
51712,	51887,	51923,	51945,	52303,
52408,	52418,	52510,	52590,	53217,
53414.				

thermoplastic compositions containing cellulose ether, see Albumen, etc.

Unclassified compositions—

Containing fibrous material. 50480.

Paste for making electrodes. 49103.

Plastic materials, mixing, see MIXING, ETC.

Plates for filter presses, see FILTERING, ETC.

Platforms for driving and withdrawing piles, see PILES, ETC.

Ploughs, see AGRICULTURAL, ETC.

Plug and socket connections electric, see ELECTRIC COUPLINGS, ETC.

Plug cocks, see VALVES, ETC.

Plugs, stemming, see EXCAVATING, ETC.

Plying yarns for making ropes, apparatus for, see ROPES, ETC.

Plywood, see WOOD CUTTING, ETC.

Plywood adhesive, see ADHESIVES, ETC.

Plywood, manufacture of, see WOOD CUTTING, ETC.

Pneumatic tyres, see WHEELS, ETC.

Pneumatic tyres and like, see WHEELS, ETC.

Pneumatic tyres, puncture sealing rubber composition for, see INDIA RUBBER, ETC.

Point operating devices for railways, see RAILWAY, ETC., PERMANENT, ETC.

Pole-changing surtches for dynamo electric machines, see ELECTRIC SWITCHES, ETC.

Poles, see BUILDINGS, ETC.

POLISHING, SHARPENING AND ABRADING (OTHER THAN COMPOSITIONS). XLIII(3).

(This heading does not include polishing of grains and seeds (see GRAINS, ETC.); cleaning and polishing knives, forks after use (see WASHING BUILDINGS, ETC.); milling and filing metals (see METAL WORKING); cutting and working stone (see STONE CUTTING, ETC.); polishing compositions for furniture and boots (SOAPS, ETC.).

46825,	46844,	47323,	47401,	49186,
49202,	49377,	49464,	49562,	49608,
49615,	49616,	49649,	49700,	49708,
50002,	50812,	50913,	52139,	53243,

Polishing yarns, see SPINNING, ETC.

Polyamides, see CARBON COMPOUNDS, ETC.

Polyamides, stabilisation of, see CARBON COMPOUNDS, ETC.

Polyene aldehyde, see CARBON COMPOUNDS, ETC.

Poly-ethylene, see CARBON COMPOUNDS ETC.

Polyglycol ethers, see CARBON COMPOUNDS, ETC.

Polyhalogen diphenyl sulphones, see DISINFECTING, ETC.

Polyhydroxy compounds, see CARBON COMPOUNDS, ETC.

Polymer solutions for making artificial fibres and filaments, see CELLULOSE, ETC.

Polymerisation and resinous condensation products, see CARBON COMPOUNDS, ETC.

Polymers, spinning, see CELLULOSE, ETC.

Polystyrene rubber composition, *see* INDIA RUBBER, ETC.

Polyvinyl solutions for making artificial fibres, *see* CELLULOSE, ETC.

Portable lamps, *see* LAMPS FOR, ETC.

Potassium compounds inorganic, *see* CHEMICAL COMPOUNDS, ETC.

Pouches, smokers', *see* CIGARS, ETC.

Powder couplings or clutches, *see* MECHANISM, MISCELLANEOUS.

Power gas generating cartridges, *see* AMMUNITION, ETC.

Power looms, *see* LOOMS.

Power presses, for moulding plastic materials, *see* MOULDING, ETC.

Power transmission gearing mechanisms, *see* MECHANISM, MISCELLANEOUS.

Power transmission systems for motor vehicles, arrangement and disposition of, *see* MOTOR VEHICLES.

Prefabricated construction of buildings, *see* BUILDINGS, ETC.

Prefabricated structures, *see* BUILDINGS, ETC.

Pregnane and derivatives thereof, *see* CARBON COMPOUNDS, ETC.

Preserving and sterilising milk and frusto juices and like, *see* FOOD, ETC.

Press tools for shaping metals, *see* METAL WORKING.

Presses for metal working, *see* METAL WORKING.

Presses for moulding plastic materials, *see* MOULDING, ETC.

Pressure cookers, *see* COOKING, ETC.

Pressure lamps, oil burning, *see* LAMPS FOR LIGHTING, ETC.

Pressure rollers for fabric sizing machine, *see* FABRICS FINISHING, ETC.

Pressure sensitive switches, electric, *see* ELECTRIC SWITCHES, ETC.

Pre-stressed concrete construction, *see* BUILDINGS, ETC.

Primary cells, electric, *see* BATTERIES, ETC.

Primary electric batteries, *see* BATTERIES, ETC.

Printer's blanket, *see* PRINTING, ETC.

PRINTING. XXXVII(1).

(*Excepting* PHOTOGRAPHY, TYPE-WRITERS).

address printing plates, *see* Configuration, etc.

colour printing process, *see* Presses, etc.

Configuration of types, faces, quads, spaces and printing and embossing surfaces. 47182, 47296, 47297, 47298, 47351, 48114, 50188, 51297.

duplicating ink, *see* WRITING, ETC.

duplicating and stencilling machines, *see* Stencils, etc.

duplicators, *see* Stencils, etc.

Embossed printing. 47181, 49747, 49748.

Etching and engraving. 49320, 51378.

fabrics, printing, *see* Textile, etc.

hosiery printing, *see* Textile, etc.

imbibition printing of pictures, on film, *see* Miscellaneous.

inking apparatus, *see* Miscellaneous.

inks, printing, *see* WRITING, ETC.

litho graphic printing blanks, *see* Configuration, etc.

Miscellaneous—

Addressographs. 51353.

Colour printing. 47689, 50607, 52239.

Impressing characters on paper and like by stylus. 48160.

Inking apparatus. 48352, 49013.

Lithographic printing machines. 52406.

Method of treating surface of plastic materials for printing. 48705.

Numbering machines. 49964.

Planographic and hectographic printing. 52444, 52445, 53249.

Pressure roller for moving webs. 49389.

Printers' blanket. 47320, 47900

Printing cellulose films. 51081.

Printing devices for weighing machines. 48113.

Printing pictures by imbibition on dye absorptive film. 48968.

PRINTING—contd.**Miscellaneous—contd.**

Printing wrappers for gramophone records with chemicals to prevent accumulation of static electric charges. 52975.

Treating surface of plastic materials for printing. 48705.

offset printing plates for copying, see Stencils, etc.

paint spraying devices, see SPRAY, - ETC.

paints applying or coating in the form of spray, see SPRAY, ETC.

planographic printing plates, see Miscellaneous.

Post-marking and franking machines.
No case.

Presses (including processes thereof) for printing.

48626, 49316, 51143, 51353, 52618,
52759, 52760, 53238, 53296.

printing covers for gramophone records with chemicals to prevent accumulation of static electric charges on records, see Miscellaneous.

record cards for statistical machines, see CALCULATING, ETC.

rotary printing machine, see Presses, etc.

sheet feeding means for printing machines, see WEBS, ETC.

squeeze for stencilling, see Stencils, etc.
Stencils, transfers and copying.

46852, 47461, 47624, 47693, 48036,
49560, 49561, 49680, 49748, 50003,
50250, 50592, 50593, 50735, 53249,
53453.

tabs for address printing plates, see Configuration, etc.

Textile printing.

46504, 46954, 47015, 47016, 47166,
47320, 47329, 47451, 47479, 47689,
48137, 48184, 48796, 49029, 49630,
49964, 50622, 50865, 51453, 51531,
51599, 51601, 51630, 51790, 52049,
52051, 52291, 52361, 52599, 52600,
53055, 53206, 53212.

type composing machines, see Type making, etc.

Type making, setting and composing.

46573, 48011, 48683, 49028, 49855,
49998.

PRINTING—concl'd.

typographical composing machines, see Typemaking, etc.

Printing apparatus, photographic, see PHOTOGRAPHY.

Printing apparatus telegraph, see TELEGRAPHS, ETC.

Printing of forms, photomechanical of, see PHOTOGRAPHY.

Printing inks, see WRITING, ETC.

Printing telegraphy, see TELEGRAPHS, ETC.

Prisms, optical, see PHILOSOPHICAL, ETC.

Projectiles, see AMMUNITION, ETC.

Projection apparatus, optical, see PHILOSOPHICAL, ETC.

Projectors, cinematographic, see CINEMATOGRAPHY.

Projectors for guiding initial path of missiles, see AMMUNITION, ETC.

PROOFING FABRICS AND PERMEABLE MATERIALS. XXIII.

belting for multiple fabrics joined by adhesives, see Fabrics compound, etc.

coating carriers with fibres, hairs, abrasives, and like under influence of electrostatic fields, see Fabric. Miscellaneous.

coating cork granules with moisture proofing solution, see Proofing, etc. (Processes).

coating paper webs with liquids, see Coating yarns, etc.

Coating yarns, threads and webs with liquid and plastic materials, apparatus for and processes dependent upon such apparatus.

47141, 47626, 49649, 50827, 51077,
51711, 51818, 53232, 53258.

compound sheet materials, see Fabrics, miscellaneous.

Fabrics, coated with liquid and plastic materials.

46629, 47311, 47508, 47536, 47841,
48250, 49191, 49202, 49231, 49364,
49649, 49756, 50232, 50848, 50849,
51048, 51049, 51077, 51135, 51314,
51339, 52322, 52325, 52358, 52487,
52994, 53231, 53232, 53278, 53398.

PROOFING FABRICS, ETC.—*contd.*

Fabrics composed of threads or fibrous materials united by adhesives.

47083, 47680, 48122, 48726, 49825, 49885, 50648.

Fabrics, compound and compound sheet materials.

47306, 47311, 47414, 48726, 48758, 49126, 49703, 50480, 50714, 50884, 51076, 51081, 51202, 51315, 51498, 51803, 52401, 52402, 52544, 52576, 52658, 53276.

Fabrics, Miscellaneous—

Coating carries with fibres, hairs, abrasives, paints, lacquors and like under electrostatic fields. 51104, 51624.

Pile fabrics. 47024.

fibres protecting against micro-organisms, *see* Proofing, etc. (Processes).

floor covering, by bounded textile fabric and backing sheet, *see* Fabrics united, etc.

laminated sheet materials, *see* Fabrics compounds, etc.

leather cloth, *see* Fabrics, Coated, etc.

Proofing permeable materials, against air, bacteria, chemicals, fire, fungi, moisture and vermin (includes only impregnation and hot coating)—

Compositions and materials.

46629, 46687, 47272, 47311, 47355, 47606, 47945, 48275, 49426, 49621, 50922, 51110, 51440, 51664, 52142, 52325, 52413, 52487, 52666, 53399.

Processes.

46629, 46663, 47172, 47272, 47311, 47558, 47565, 47626, 48275, 49426, 50480, 50510, 50856, 50969, 51048, 51077, 51110, 51315, 51440, 51610, 52304, 52325, 52487, 53159.

reinforced multiply waterproof paper, *see* Fabrics compound etc.

rubberised fabrics, *see* Fabrics coated, etc.

sheets and laminated boards coated with resinous compositions, *see* Fabrics, coated etc.

treating fibres with resins, *see* Coating, etc.

wood impregnating with liquids, *see* Proofing, etc. (Processes).

PROOFING FABRICS, ETC.—*concl'd.*

wood preservatives, *see* Proofing, etc. (Compositions, etc).

wood treating with liquids, device for, *see* Proofing, etc. (Processes).

wood, treating with liquids and gases, *see* Proofing, etc.

Propulsion units for air crafts arrangement and disposition of, *see* AERONAUTICS.

Propane diols, *see* CARBON, ETC.

Propellers, *see* SHIPS, ETC.

Proportioning pumps, reciprocating, *see* PUMPS, ETC.

Props and shores for building, *see* BUILDINGS, ETC.

Protecting arrangements electrical machinery, *see* ELECTRIC SUPPLY, ETC.

Protective coverings for cables, *see* CONDUCTORS, ETC.

Protective devices for electrical installations other than circuit breakers and safety switches, *see* ELECTRIC SUPPLY, ETC.

Protein filaments, *see* CELLULOSE, ETC.

Protein food, *see* FOOD, ETC.

Protein solution for making filaments, *see* CELLULOSE, ETC.

Proteins, *see* CARBON COMPOUNDS, ETC.

Pruning machine for crops, *see* AGRICULTURAL, ETC.

Pteridines, *see* CARBON COMPOUNDS, ETC.

Pteroylglutamic acid, *see* CARBON COMPOUNDS, ETC.

Pulley blocks, *see* LIFTING, ETC.

Pulleys, driving and like, *see* MECHANISM, ETC.

Pulp, cellulose, *see* PAPER.

Pulp classifiers, *see* WASHING GRANULAR, ETC.

Pulp, fibrous, *see* PAPER.

Pulp, preparing from bagasse, *see* PAPER.

Pulse code modulators, electric, *see* WIRELESS, ETC.

Pulse counters, discharge tubes for, *see* VACUUM, ETC.

Pulse counting circuits, electric, *see* CALCULATING, ETC.

Pulse delay circuits, *see* WIRELESS, ETC.

- Pulse distributors, electric, *see* WIRELESS, ETC.
- Pulse generating apparatus, electric, *see* WIRELESS, ETC.
- Pulse signalling systems, electric, *see* WIRELESS, ETC.
- Pulverising, *see* GRINDING, ETC.
- Pumps, propeller type, *see* CENTRIFUGAL, ETC., PUMPS.
- PUMPS, RECIPROCATING, FOR LIQUIDS. XLVII(3).**
- (This heading includes only constructional features of the pumps. Arrangements and adaptation of pumps in particular machines are indexed under headings denoting such machines.)*
- Actuating, mechanism for. 51840.
- Buckets and plungers, constructional details of. 46489, 51841.
- cylinders, *see* General design, etc.
- diaphragm pumps, general design of, *see* General design, etc.
- fluid actuated non-return valves for construction of, *see* VALVES, ETC.
- Framings and carriages for. No case.
- General design of pumps (other than constructional details of specific parts like actuating mechanism, plungers, and valves). 47896, 47898, 50450, 51452, 52360.
- hydraulic multiram pumps, general design of, *see* General design, etc.
- Miscellaneous—
- Oil well pump cleaners. 49541.
- packings for pump plungers or pistons, *see* Buckets, etc.
- Pipes, rising mains and delivery spouts. 52310.
- pistons, *see* Buckets, etc.
- pressure limiting arrangement for, *see* Regulating, etc.
- Regulating and controlling delivery. 47577, 52310, 52469.
- Valve and valve seats, arrangement of. 51842.
- Pumps, rotary, other than centrifugal and turbine pumps, *see* ROTARY, ETC.
- Puncture sealing compositions containing rubber, *see* INDIA RUBBER, ETC.
- Puriforming appliances, *see* COOKING, ETC.
- Purifying fats, *see* FATS, ETC.
- Purifying water, *see* WATER AND UNSPECIFIED LIQUIDS, ETC.
- Purse cum key holders, *see* BAGS, ETC.
- Purses, leather and like, *see* BAGS, ETC.
- Pyrazolidines, *see* CARBON COMPOUNDS, ETC.
- Pyridazine and derivatives thereof, *see* CARBON COMPOUNDS, ETC.
- Pyridazone, *see* CARBON COMPOUNDS, ETC.
- Pyridine and its derivatives, *see* CARBON COMPOUNDS, ETC.
- Pyridine compounds, *see* CARBON, ETC.
- Pyridones, *see* CARBON COMPOUNDS, ETC.
- Pyridopyrimidines, *see* CARBON, ETC.
- Pyrimidine and derivatives thereof, *see* CARBON COMPOUNDS, ETC.
- Pyrophoric lighters, *see* LAMPS FOR LIGHTING, ETC.
- Q**
- Quartz crystals, graving, *see* DISTILLING, ETC.
- Quaternary ammonium compounds, *see* CARBON COMPOUNDS, ETC.
- Quinazolones compounds, *see* CARBON COMPOUNDS, ETC.
- Quinoline derivatives, *see* CARBON COMPOUNDS, ETC.
- Quinoxaline compounds, *see* CARBON COMPOUNDS, ETC.
- R**
- Race totalisators, *see* CALCULATING, ETC.
- Racks, furniture, *see* FURNITURE.
- Racquet presses, *see* GAMES, ETC.
- Radar systems, *see* WIRELESS, ETC.
- Radiation, appliances for treating diseases with, *see* MEDICAL, ETC.

Radiators or heaters, electric, *see* HEATING BY ELECTRICITY.

Radio antennae, *see* WIRELESS, ETC.

Radio communication system, *see* WIRELESS, ETC.

Radio direction finders, *see* WIRELESS, ETC.

Radio navigation systems, *see* WIRELESS, ETC.

Radio or television apparatus, circuit for supplying current to, *see* ELECTRIC SUPPLY, ETC.

Radio receivers, *see* WIRELESS, ETC.

Radio telegraph systems, *see* WIRELESS, ETC.

Radio opaque compositions, *see* DISINFECTING, ETC.

Rail joints, *see* RAILWAY, ETC., PERM. WAY, ETC.

Rail oilers, *see* LUBRICATING, ETC.

Rail road ties, *see* RAILWAY, ETC., PERMANENT, ETC.

Rail spikes, *see* NAILS, ETC.

Railing or fencing, *see* FENCING, ETC.

Rails for structural construction, *see* BUILDINGS, ETC.

RAILWAY AND TRAMWAY PERMANENT WAY AND SYSTEMS. L.

aerial monorail system, *see* Electric railway, etc.

concrete sleepers, *see* Permanent, etc. (Sleepers-composite, etc.).

concrete sleepers, moulding, *see* MOULDING, ETC.

Crossings and points, and switches for,—Crossings. 47991.

Operating and controlling operation of points, switches and movable parts of crossings. 48843, 53183, 53367.

Points. 47371.

Switches. No case.

Derailers and car replacers. No case.

Electric railways (including electric traction) and other systems of railways and tramways (elevated, rope, pneumatic, track propulsion and like).

46798, 48599, 49311, 49312, 49390, 50740, 50767, 50768, 51318, 51343, 51366, 52967, 52968.

electric traction motors, control systems for, *see* MOTOR CONTROL, ETC.

RAILWAY, ETC.—Contd.

electrically propelled rail vehicles, *see* RAILWAY, ETC., VEHICLES, ETC.

fastening devices for securing rails to sleepers, *see* Permanent, etc.

(Sleepers. Rails securing, etc.).

fish plate joints, *see* Permanent, etc (Rail joints).

friction arresting grips and like devices on permanent way, acting directly on vehicles, *see* BRAKES, ETC.

jacks for lifting rails, *see* LIFTING, ETC.

locking devices for rail bolts and nuts, *see* BOLTS, ETC.

lubricating rails means for, *see* LUBRICATING, ETC.

mechanical tampers, *see* Permanent way, (Miscellaneous).

monorail systems, *see* Electric, etc.

operating and locking of facing points device for, *see* Crossings, etc. (Operating, etc.)

overhead electric traction conductors, suspending devices for *see* CONDUCTORS, ETC.

overhead or elevated rail systems, *see* Electric, etc.

Permanent way—

Chair-keys or wedges. 48173, 50698.

Chairs. No case.

Miscellaneous—

Tampers. 50266.

Rail joints. 46562, 49716.

Rails, construction of. 50767.

Sleepers—

Composite and compound (including stone, glass and like and rail securing means special thereto). 49351, 49434, 49435, 52211.

Metal. No case.

Rails securing to sleepers (other than means, etc. special to composite and wood sleepers). 47698, 51907, 52211, 52559.

Wood. 52211, 52608.

rail fastening devices, *see* Permanent way, etc. (Sleepers) (Rails, etc).

rail spikes, *see* NAILS, ETC.

RAILWAY, ETC.—concl'd.

- rail ties or sleepers, *see* Permanent, etc. (Sleepers—Composite, etc.).
- rails, lubricating, *see* LUBRICATING.
- rails securing to wooden sleepers, *see* Permanent way, etc. (Sleepers). (Wood).
- rails, welding, *see* METAL WORKING.
- retarding railway apparatus mounted on track for vehicles, *see* Stops, etc.
- shunting systems for elevated rail systems, *see* Electric, etc.
- spikes, construction of, *see* NAILS, ETC.
- station, platform and yard layout for elevated rail systems, *see* Electric, etc.
- Stops fixed to permanent way. 50998.
- support structures for mono-rail or elevated rail vehicles, *see* Electric, etc.
- switch operating mechanisms, *see* Crossings, etc. (Operating, etc.).
- track gauges, *see* GAUGES, ETC.
- transition curves of rail tracks, forms and laying of, *see* Permanent, etc. (Rails, construction of).
- Turntables and traversers. No case.
- vehicles for moving wagons along track, *see* RAILWAY, ETC., VEHICLES, ETC.

RAILWAY AND TRAMWAY VEHICLES, BODY DETAILS, BUFFERS AND COUPLINGS AND UNDERCARRIAGES OF. LII(2).

- articulated railway vehicles, wheel and axle arrangement for, *see* Undercarriages, etc. (Wheel and axle, etc).
- bearing structures for supporting vehicle bodies, *see* Undercarriages, etc. (Springs, etc.).
- Body details, (including the general design of various types of bodies). 46671, 46811, 47119, 49335, 49392, 53137.
- Buffers, draw gear and means for lessening shock (other than construction of springs and cushions)—
Buffers, construction of. 48527.

RAILWAY AND TRAMWAY, ETC.—cont'd.

- Buffers, etc.
- Combined buffer and draw gear. 47782, 50597, 51814.
- Draw gear (other than combined buffer and draw gear).
No case.
- buffers, pneumatic and hydraulic spring, *see* SPRINGS, ETC.
- casting arrangement for railway coupler kuckle, *see* CASTING METALS.
- core assembly for casting railway couplers, *see* CASTING METALS.
- Couplings—
Automatic. 46642, 48665, 49066, 51289, 51290, 52037, 53325.
Non-automatic. 49066, 49291.
- cushioning units for shock absorbers of draft rugging, *see* SPRINGS, ETC.
- driving motors mounting and arranging in, *see* Miscellaneous.
- foot supports for access to upper births, *see* Body details, etc.
- lubricating means for rails mounted on railway vehicles, *see* LUBRICATING, ETC.
- Miscellaneous—
Axle drives for dynamos. 48930.
Driving motors arranging and mounting carriages. 46823.
Tank for transporting liquids and solids. 51480.
Moving wagons along rail tracks, vehicles for. 50997.
- railway carriages ventilating, *see* VENTILATION.
- resilient suspension system for general application, *see* SPRINGS, ETC.
- springs and cushioning devices for buffers and draw-gears, construction of, *see* SPRINGS, ETC.
- steerable articulated wheel and axle arrangement for, *see* Undercarriages, etc. (Wheels, etc.).
- track engaging device for moving rail wagons, *see* RAILWAY, ETC., PERMANENT, ETC.

RAILWAY AND TRAMWAY, ETC.—
concl'd.

truck and bolster arrangements, *see* Undercarriages, etc. (Frames, etc.).

truck frames, *see* Undercarriages, etc. (Frame, etc.).

Undercarriages and underframes, details of—

Axles. No case.

Frame construction. 49670, 51425, 53137.

Springs, arrangement of and mounting bodies on.

46887, 50130, 51078.

vehicles for moving wagons along tracks, tracks, *see* Miscellaneous.

Wheels and axles, arrangement of.

46887, 49091, 49340, 51445.

Railway car construction, *see* RAILWAY, ETC., VEHICLES, ETC.

Railway couplers, *see* RAILWAY ETC., BODY, ETC.

Railway crossings, *see* RAILWAY, ETC., PERMANENT, ETC.

Railway lighting electric installations, *see* ELECTRIC SUPPLY, ETC.

RAILWAY SIGNALS AND COMMUNICATING APPARATUS. LI(3).

actuating signals by track apparatus, *see* Track apparatus, etc.

block signalling systems, *see* Signalling systems, etc.

code communication systems for centralised traffic control systems, *see* Signalling systems, etc.

Controlling traffic on, staff tablet and ticket systems for (including stopping trains independently of drivers).

52224.

electromagnetic relays for coded or pulsed track signalling, *see* ELECTRIC SWITCHES, ETC.

friction arresting grips and like devices on permanentway, acting directly on vehicles, *see* BRAKES, ETC.

Hand levers and hand gearing (other than interlocking). No case.

Indicating condition of bridges, tunnels, permanent way and clearance for sidings, and crossings. No case.

RAILWAY SIGNALS, ETC.—*cont'd.*

Indicators and like cabin apparatus for indicating setting in of signals. No case.

Interlocking apparatus and apparatus for controlling and locking signals. 46509, 48908, 52153, 52180.

measuring speed of railway cars, *see* Recording signals, etc.

Miscellaneous. No case.

Recording signals and indicating and recording movements and speeds on trains. 49415.

reversers, signal, *see* Interlocking, etc.

Rods and wires for operating points and signalling apparatus and wire and rod compensators. 52716.

Signalling instruments. No case.

Signalling systems (other than interlocking systems). 46534, 46688, 47691, 52630.

Signalling to and communicating between trains and on trains. No case.

Stopping and starting trains independently of driver and of track apparatus for interaction with moving trains. 52502.

stops fixed to permanentway, *see* RLY. ETC., PERMANENT, ETC.

Track apparatus for interactions with moving trains.

47863, 49415, 50427, 52630.

track apparatus for railway signalling, *see* Track apparatus, etc.

Visible and audible signals (including lamp signals). No case.

Railway switches, *see* RAILWAY, ETC., PERMANENT, ETC.

Railway track gauges, *see* GAUGES, ETC.

Raising or forcing water and other liquids, *see* WATER, ETC., RAISING, ETC.

Rayon and like fibres, *see* CELLULOSE, ETC.

Razors. *see* CUTLERY, ETC.

Reaction turbines, *see* TURBINES, ETC.

Receivers, wireless, *see* WIRELESS, ETC.

Receiving circuits for electrical wave forms, *see* WIRELESS, ETC.

Receiving systems, wireless, *see* WIRELESS, ETC.

- Receptacles for stationery, box like, see **BOXES, ETC.**
- Reciprocating electric motors, see **DYNAMO-ELECTRIC, ETC.**
- Reciprocating pumps, see **PUMPS, ETC.**
- Record card controlled machines, statistical, see **CALCULATING, ETC.**
- Record card perforating machines, see **CUTTING, ETC.**
- Record cards for statistical machines, see **CALCULATING, ETC.**
- Recorders, phonographic, see **PHONOGRAPHS, ETC.**
- Recording and storing intelligence waves, see **WIRELESS, ETC.**
- Recording and storing intelligence waves in a modified form, see **WIRELESS, ETC.**
- Records, gramphones, see **PHONOGRAPHS, ETC.**
- Records, phonograph, see **PHONOGRAPHS, ETC.**
- Recovering germanium from coal, see **METALS, EXTRACTING, ETC.**
- Recovery of copper and tin from tinned copper, see **METALS, EXTRACTING, ETC.**
- Rectifiers, electric, see **ELECTRIC CURRENTS, ETC.**
- Rectifying alternating electric currents, see **ELECTRIC CURRENTS, ETC.**
- Recuperator elements for furnaces, see **FURNACES, ETC.**
- Red lead, see **CHEMICAL COMPOUNDS, ETC.**
- Reducing or condensing fibres, see **SPINNING, ETC.**
- Reeds for looms, see **LOOMS.**
- Reels for feeding webs and sheets, see **WEBS, ETC.**
- Reels or bobbins, see **SPINNING, ETC.**
- Refining gasoline hydrocarbons thermally, see **DISTILLING, ETC.**
- Refining iron, see **IRON, ETC.**
- Reflectors for electric lamps, see **LAMP-CHIMNEYS, ETC.**
- Reflectors for lamps, see **LAMP-CHIMNEYS, ETC.**
- Reflectors for lighting systems, see **LAMP-CHIMNEYS, ETC.**
- Reflectors, optical, see **PHILOSOPHICAL, ETC.**
- Refractometers, see **PHILOSOPHICAL, ETC.**
- Refractory articles containing silicon nitride, see **CEMENT, ETC.**
- Refractory blocks, see **BRICKS, ETC.**
- Refractory linings or coverings for furnaces or for high temperature works, see **CEMENT, ETC.**
- Refractory materials and compositions, see **CEMENT, ETC.**
- Refrigerating machines, see **COOLING, ETC.**
- Refrigerating systems, see **COOLING, ETC.**
- Refrigerator cars, railway, construction of, see **RAILWAY, ETC. VEHICLES, ETC.**
- Refrigerators, see **COOLING, ETC.**
- Regenerated cellulose yarns, see **CELLULOSE, ETC.**
- Regeneration of catalysts, see **CHEMICAL PROCESSES, ETC.**
- Regenerative heat exchangers, see **HEATING SYSTEMS, ETC.**
- Regenerative repeaters, thermionic, for low frequency currents, see **WIRELESS, ETC.**
- Regenerators, heat exchanging, see **HEATING SYSTEMS, ETC.**
- Regenerators, coke-oven, see **COKING, ETC.**
- Regenerators for furnaces, see **FURNACES, ETC.**
- Regenerators for hot gas reciprocating engines, see **HOT AIR, ETC.**
- Registering and translating circuits for telephone systems, see **TELEPHONES, ETC.**
- Registering circuits, electric, for receiving and storing data, see **ELECTRIC SIGNALING, ETC.**
- Regulating flow of liquids, see **VALVES, ETC.**
- Regulator switches for fans, see **MOTOR CONTROL, ETC.**
- Reinforced concrete, see **BUILDINGS, ETC.**
- Reinforced structures, see **BUILDINGS, ETC.**
- Reinforcements for concrete structures and prefabricated building units, see **BUILDINGS, ETC.**

Reinforcing concrete bodies, *see* BUILDINGS, ETC.

Reinforcing pipes, conduits and like cylindrical bodies, *see* PIPES AND, ETC.

Reinforcing rods for concrete, *see* BUILDINGS, ETC.

Relay circuits, static type, *see* WIRELESS, ETC.

Relay counting systems, *see* CALCULATING, ETC.

Relay circuits, employing cold cathode electric discharge tube, *see* WIRELESS, ETC.

Relays contact making, *see* ELECTRIC SWITCHES, ETC.

Relugging tyres, *see* WHEELS, ETC.

Remote control devices, electric, *see* ELECTRIC SIGNALLING, ETC.

Remote control devices, fluid pressure operated, *see* HYDRAULIC PRESSES, ETC.

Remote control systems, electric, *see* ELECTRIC SIGNALLING, ETC.

Repair patches, rubber adhesive, for tyre tubes, *see* INDIA RUBBER, ETC.

Repeaters, telegraph, *see* TELEGRAPHS, ETC.

Reserpig acid and its derivatives, *see* CARBON COMPOUNDS, ETC.

Resilient joints, construction of, *see* SPRINGS, ETC.

Resilient suspension systems of general application, *see* SPRINGS, ETC.

Resinous compositions, coating, painting and like, *see* PAINTS, ETC.

Resinous compositions containing rubber, *see* INDIA RUBBER, ETC.

Resinous compositions, moulding, *see* MOULDING, ETC.

Resinous compositions, plastic, *see* PLASTIC COMPOSITIONS, ETC.

Resinous condensation and polymerisation products, *see* CARBON COMPOUNDS, ETC.

Resinous polymerisation products, *see* CARBON COMPOUNDS, ETC.

Resins and resinous compounds, *see* WAXES, ETC.

Resistances, electric, *see* CAPACITANCES, ETC.

Respiratory appliances, *see* MEDICAL, ETC.

Retaining means for drafting rollers, *see* SPINNING, ETC.

Retarding apparatus for vehicles, *see* WHEELS, ETC.

Retort furnaces, *see* FURNACES, ETC.

Rheostats, *see* CAPACITANCES, ETC.

Riboflavin, *see* CARBON COMPOUNDS, ETC.

Rims and felloes for vehicle wheel tyres, *see* WHEELS, ETC.

Riveting metal, *see* METAL WORKING.

Rivets, *see* BOLTS, ETC.

Road making vehicles, *see* ROADS AND WAYS, ETC.

ROAD VEHICLES. LH(3).

attachment for carrying passengers on tractors, *see* Body details, etc.

axle and suspension assembly, *see* Under-carriages.

axle for tractors, *see* MOTOR VEHICLES.

Body details of road vehicles comprising design of various types of bodies including motor vehicle bodies.

46512, 47313, 47537, 47556, 47723,
48341, 48573, 48584, 49016, 49037,
49229, 49381, 49982, 50182, 50197,
50697, 50999, 51480, 52002, 52058,
52728.

door checking and holding device for motor vehicle door, *see* DOOR AND GATE, ETC.

Draught, appliances for. 53085.

draw bar attachment for vehicles. *see* Draught, etc.

drophead for motor car bodies, *see* Body details, etc.

dumping wagons and the like, *see* Body details, etc.

liquid tanks on vehicles, filling by engine suction, *see* WATER, ETC., RAISING, ETC.

motor vehicle axle suspensions, *see* MOTOR VEHICLES, ETC.

perambutators, *see* Body details, etc.

Rail and road vehicles, details applicable generally to.

(This heading includes such details as antidazzle screens, luggage racks, seats, wheel guards and wind screens and like.)

50816, 53166.

ROAD VEHICLES.—contd.

resilient suspension systems for general application, *see* SPRINGS, ETC.

resilient torsion joints for chassis and suspension, systems, *see* Undercarriages.

road making vehicles, *see* ROADS AND WAYS, ETC.

snow and insect deflector attachment or devices, *see* Rail and road, etc.

steering arrangements for road vehicles, *see* Undercarriages.

steering mechanism for tractors, *see* MOTOR VEHICLES.

tipping vehicle, frame or chassis construction of, *see* Undercarriages.

tractor implement combinations, *see* AGRICULTURAL, ETC.

trailers, general construction of, *see* Body, etc.

trimming motor vehicle roofs, *see* Body details, etc.

turntable arrangement attached to wheel axle, *see* Undercarriages.

Undercarriages.

46925, 47537, 47556, 47723, 48013, 48147, 48836, 49979, 50242, 50289, 51474, 51578, 52399, 53181.

wheel base for motor vehicles, *see* MOTOR VEHICLES.

wind shields, automobile, *see* Rail and road, etc.

ROADS AND WAYS. XXVII(3).

Apparatus for making and repairing (including plants for making tar, macadam and cauldrons, asphalt, gravel-heating and like).

51961, 52371.

Gratings (road surface and pavement), and manhole frames.

No case.

road rollers, *see* AGRICULTURAL, ETC.

road making vehicles, *see* Apparatus for, etc.

Road scavenging, tarring, watering and other surface treatment of roads and ways. 49092.

Roads and ways, construction of (other than apparatus for making and repairing).

47259, 52448, 52861, 53012.

soil stabilization for the construction of roadways, *see* Roads and ways, etc.

Rock breaking apparatus, *see* MINING, ETC.

Rock drills, *see* MINING, ETC.

Rock drills, percussion, *see* STONE, ETC.

Rockets, *see* AMMUNITION, ETC.

Rocks, boring or drilling, *see* MINING, ETC.

Rodent repellent compositions, *see* DISINFECTING, ETC.

Rodenticide composition, *see* DISINFECTING, ETC.

Rodenticide dispensing appliances, *see* ANIMALS, ETC.

Roller bearings, *see* BEARINGS, ETC.

Roller blinds, *see* FURNITURE, ETC.

Roller gill drawing frames, *see* SPINNING, ETC.

Roller supporting and weighting mechanisms, spinning, *see* SPINNING, ETC.

Rollers for dough shaping and working, *see* COOKING, ETC.

Rollers for feeding webs, *see* WEBS, ETC.

Rollers for spinning machines, *see* SPINNING, ETC.

Rollers for supporting conveyor belts, *see* LIFTING, ETC.

Rollers, grinding and abroading, *see* POLISHING, ETC.

Rollers or cylinders, general construction of, *see* FABRICS FINISHING, ETC.

Rollers or cylinders solid bodies and solid shells general construction of, *see* FABRICS FINISHING, ETC.

Rollers, land, garden and road, *see* AGRICULTURAL, ETC.

Rollers or cylinders, solid bodies and solid shells general construction of, *see* FABRICS FINISHING, ETC.

Rolling metals, *see* METAL WORKING.

Roof covering plates, *see* BRICKS, ETC.

Roof lights, *see* DOORS AND WINDOWS, ETC.

Roof supports for mines, *see* MINING, ETC.

Roofing felts, *see* BUILDINGS, ETC.

Roofing tiles, *see* BRICKS, ETC.

Roofs, and roofing, *see* BUILDINGS, ETC.

Rooms, cooling, heat exchangers for, *see* HEATING SYSTEMS, ETC.

ROPES AND CORDS. LXIV(7).

46867, 47079, 49391, 50019, 50465,
50946, 51045, 51202, 51815, 52785.

stranding or twisting cables, plant for,
see METAL WORKING.

Rotary driers, see DRYING SYSTEMS,
ETC.

Rotary duplicating machines, see PRINT-
ING, ETC.

ROTARY ENGINES, PUMPS, BLOWERS AND LIKE. XLIV(3).

diaphragm pumps, see PUMPS, ETC.

Driving arrangements. No case.

gear pumps, see General design
(Movable, etc.)

General design—

Fixed abutment type of apparatus.
49449, 51795.

Movable abutment type of apparatus.
47342, 48174, 48971, 50050, 51173,
51554, 52972, 52973.

Unclassified—

Helical gear pumps. 47137.

Pumps with undulated membrane
rotors. 49076.

Spiral gear pumps. 50666.

Worm gear pumps. 47177.

Governing and regulating including
valve gear and valve-actuating
mechanism.

47577.

gyratory casings with sliding or rock-
ing vanes, machines with, see General
etc. (Fixed etc.)

Miscellaneous—

Varying delivery pressure or volume.
52310.

monopumps or spiral gear pumps, see
General design—(Unclassified).

pressure limiting arrangements for
pumps and compressors, see Govern-
ing, etc.

rotary helical pump for forcing lubri-
cant, see General design—(Unclassi-
fied).

spiral gear pumps, see General design
—(Unclassified).

Working fluid supply.

No case.

worm gear pumps, see General design
—(Unclassified).

Rotary filters, see FILTERING, ETC.

Rotary furnaces, see FURNACES, ETC.

Rotary kilns, see FURNACES, ETC.

Rotary mixing apparatus, see MIXING,
ETC.

Rotors for electric machines, see
DYNAMO-ELECTRIC, ETC.

Rubber antioxidants, see INDIA RUBBER,
ETC.

Rubber articles, moulding, see MOULD-
ING, ETC.

Rubber compositions, see INDIA RUBBER,
ETC.

Rubber cushions for seats, see FURNI-
TURE, ETC.

Rubber, halogenated, see INDIA RUB-
BER, ETC.

Rubber pipes and tubes, see PIPES, ETC.

Rubber, preserving, see INDIA RUBBER
ETC.

Rubberised fabrics, see PROOFING,
ETC.

Rust removing by electrolysis, see
ELECTROLYSIS, ETC.

Rust, scale and like removing, otherwise
than by electrolysis, see INCRUSTA-
TION, ETC.

S

Sacks, sewing, see SEWING, ETC.

Saddle pumps for cycles, construction of,
see AIR AND GASES, ETC.

Saddles for cycles and motor cycles, see
CYCLES, ETC.

Safety apparatus for steam boilers, see
STEAM GENERATORS.

Safety fuses for blasting and mining, see
AMMUNITION, ETC.

Safety razors, see CUTLERY.

Safety valves for locomotives, see
VALVES, ETC.

Salicylic acid and its derivatives, see
CARBON, ETC.

Salts obtaining by evaporation, see DIS-
TILLING, ETC.

Sand paper, see POLISHING, ETC.

Sanitary closets, see CLOSETS, ETC.

Sanitary napkins, see MEDICAL, ETC.

Sanitary towels, see MEDICAL, ETC.

Sapogenin ester, see CARBON COM-
POUNDS, ETC.

- Saponins, *see* CARBON COMPOUNDS, ETC.
- Sawing machines, wood, *see* WOOD CUTTING, ETC.
- Saws, circular, band or frame *see* WOOD CUTTING, ETC.
- Scaffoldings, *see* BUILDINGS, ETC.
- Scales removing and preventing in boilers and evaporators, *see* INCRUSTATION, ETC.
- Scissors, *see* CUTLERY, ETC.
- Scoop arm devices for raising loads, *see* LIFTING, ETC.
- Scoops for digging, *see* EXCAVATING, ETC.
- Scrapers and rakes for transporting solids, *see* LIFTING, ETC.
- Scrapers or surface soils removing apparatus, *see* EXCAVATING.
- Screen for strainers and filters, *see* FILTERING, ETC.
- Screening or sifting apparatus, *see* SIFTING, ETC.
- Screw nails, *see* NAILS, ETC.
- Screw-nicking machines, *see* METAL WORKING.
- Screw-plug stoppers for containers, *see* STOPPERING, ETC.
- Screws, making, *see* METAL WORKING.
- Screws or bolts, *see* BOLTS, ETC.
- Screws, wood, *see* NAILS, ETC.
- Sealing conductors in sub-marine repeater housings, *see* CONDUCTORS, ETC.
- Sealings containers, *see* STOPPERING, ETC.
- Sealing devices between relatively immovable or fixed members, *see* STEAM ENGINES, ETC.
- Sealing devices between relatively movable bodies, *see* STUFFING BOXES, ETC.
- Sealing devices for rotary shafts, *see* STUFFING BOXES.
- Sealing devices for joints between conduits and like tubular members, *see* PIPES JOINTS, ETC.
- Sealing glands for electric cable joints, *see* ELECTRIC COUPLINGS, ETC.
- Sealing metal to glass, *see* UNITING METAL, ETC.
- Sealing off glass tubes, *see* GLASS, ETC.
- Sealing pads, moulding, *see* MOULDING, ETC.
- Sealing punctures in tyres and tubes, composition for, *see* INDIA RUBBER, ETC.
- Seaming or sewing fabrics, *see* SEWING, ETC.
- Seats, cushion, *see* FURNITURE.
- Seats for vehicles and like, *see* FURNITURE.
- Sector gates for controlling or regulating rivers, tides and like, *see* HYDRAULIC ENGINEERING, ETC.
- Sedative and hypnotic compositions, *see* DISINFECTING, ETC.
- Seed dispensing mechanisms for seed planting appliances, *see* AGRICULTURAL, ETC.
- Seed dressing compositions *see* AGRICULTURAL, ETC.
- Seeds, bleaching, *see* GRAINS, ETC.
- Seeds, sowing, *see* AGRICULTURAL, ETC.
- Seismic exploration systems, electric, *see* MEASURING, ETC.
- Selective signalling systems electric other than telephones & telegraphs, *see* ELECTRIC SIGNALLING.
- Selective systems for automatic telephone exchanges, *see* TELEPHONES, ETC.
- Selector banks for telephones *see* TELEPHONES, ETC.
- Selector switches for telephones, *see* TELEPHONES, ETC.
- Semi-conducting devices, electric, *see* WIRELESS, ETC.
- Semi-conductor device circuits for amplifying and generating oscillatory and pulsatory currents, *see* WIRELESS, ETC.
- Semi-conductor devices for wireless signalling, *see* WIRELESS, ETC.
- Semi-conductor devices for rectifying electric currents, *see* ELECTRIC CURRENTS, ETC.
- Senna pods treating to produce a laxatives, *see* DISINFECTING, ETC.
- Separating granular materials by wet processes, *see* WASHING GRANULAR, ETC.
- Separating dust from air and gases, *see* FILTERING, ETC.
- Separating gas mixtures, other than by liquifaction, *see* CHEMICAL PROCESSES, ETC.
- Separating hydrocarbons by extractive crystallisation, *see* DISTILLING, ETC.

Separating liquids by distillation, *see* DISTILLING, ETC.

Separating liquids from liquids or solids centrifugally means for, *see* CENTRIFUGAL MACHINES, ETC.

Separating metals from alloys, *see* METALS, EXTRACTING, ETC.

Separating mixtures of gases, otherwise than by liquifaction, *see* CHEMICAL PROCESSES, ETC.

Separating or classifying granular materials by wet processes, *see* WASHING, ETC.

Separating or sifting solid materials, *see* SIFTING, ETC.

Separating solid particles from liquids magnetically, means for, *see* MAGNETIC, ETC.

Separating solid materials by floatation and like selective processes, *see* WASHING GRANULAR, ETC.

Separating solid particles from liquids by gravity, *see* FILTERING, ETC.

Separating solid particles, cyclone apparatus for, *see* CENTRIFUGAL MACHINES, ETC.

Separators battery, *see* BATTERIES, ETC.

Separators, centrifugal, *see* CENTRIFUGAL MACHINES, ETC.

Separators for accumulators, *see* BATTERIES, ETC.

Serine derivatives, *see* CARBON COMPOUNDS, ETC.

Serums, *see* DISINFECTING, ETC.

Servo-motor control systems, compressed gas operated for casting machines, *see* HOT AIR, ETC.

Servo-motor control systems for unspecified application fluid pressure actuated, *see* HYDRAULIC PRESSURE, ETC.

Servo-systems, electric, *see* ELECTRIC SIGNALLING, ETC.

SEWAGE, TREATMENT OF. II(3).

(Treatment applicable-solely for obtaining particular products are indexed under headings for such products. This heading does not include CLOSETS, FILTERING, and SIFTING.)

Bacteriological processes including aerating and oxidising processes and plants depending upon such processes.
16484, 46907, 48736, 49702, 51639, 52749.

SEWAGE, TREATMENT OF—contd.

clarifiers tanks for, *see* GRAVITY, ETC
Gravity-separation apparatus.

49061, 50551, 53193.

Processes, and plant, miscellaneous.

47316, 52930, 53193.

sedimentation processes and apparatus, *see* Gravity, etc.

SEWING AND EMBROIDERING. LXVI(7).

Needles, bodkins, prickers, stillets needle threaders, thimbles and like tools and accessories.

No case.

Sewing and embroidery. 46558, 49107, 51086.

Sewing machines. 47258, 47455, 47521, 47532, 47857, 48834, 48835, 52041, 52330, 53112.

Shaft couplings, *see* MECHANISM MISCELLANEOUS.

Shaft furnaces, *see* FURNACES, ETC.

Shaft kilns, *see* FURNACES, ETC.

Shaft-positioning devices, *see* MECHANISM MISCELLANEOUS.

Shampooing compositions, *see* SOAPS, ETC.

Shaping metals under pressure, *see* METAL WORKING.

Shaving brushes, *see* BRUSHING, ETC.

Sheathing electric cables, *see* CONDUCTORS, ETC.

Sheaths for cycle handle bars, *see* CYCLES, ETC.

Sheaths for handles of pliers and like tools, *see* HAND TOOLS.

Sheaves or pulleys, driving and like, *see* MECHANISM, MISCELLANEOUS.

Sheet materials, dispensing, *see* WEBS AND SHEETS, ETC.

Sheet material feeding and delivering, *see* WEBS, ETC.

Sheet materials composition laminated, *see* PROOFING, ETC.

Sheet materials, compound or laminated, *see* PROOFING, ETC.

Sheet metal girders, *see* BUILDINGS, ETC.

Sheet metal rail road cars, fabricating etc. *see* METAL WORKING.

Sheets and webs, feeding and moving, *see* WEBS, ETC.

Sheets, electric pinhole detectors for testing, see MEASURING, ETC.

Sheets for buildings construction, see BUILDINGS, ETC.

SHIPS AND BOATS. LIII(2).

ballast, arrangement of, see Design, etc.

Design and structural details.

47599, 47964, 48059, 48281, 48584, 51480, 53144.

hulls, means for preventing fouling of, see INCRUSTATION, ETC.

leak detectors for fuel tanks, electric, see MEASURING, ETC.

moorings for reducing movements of ships in harbours, see Pontoon, etc.

Pontoons, rafts and fittings and accessories, miscellaneous for. 52270.

Propelling (including propellers, screw and like).

49076, 50054, 53291.

Rigging, sails and spars for.

No case.

Steering and manoeuvring (other than by propellers and propelling apparatus).

No case.

Stowing, handling and launching apparatus.

No case.

Towing.—No case.

armour and armour plating, see Design, etc.

drag anchors, see Pontoons, etc.

Shock absorbers, see SPRINGS, ETC.

Shock absorbers or buffers, railway, see RLY., ETC., VEHICLES, ETC.

Shock absorbers, other than railway rubbers, see SPRINGS, ETC.

Shock absorbing mechanisms, see SPRINGS, ETC.

Shoe shaping counters, see BOOTS AND SHOES.

Shoes, see BOOTS, ETC.

Shot peening of metal surfaces, see POLISHING, ETC.

Shrimp de-veining machines, see COOKING, ETC.

Shrinking and finishing fabrics, see FABRICS, FINISHING, ETC.

Shutterings for buildings, see BUILDINGS, ETC.

Shutters for cameras, see PHOTOGRAPHY.

Shuttles, loom, see LOOMS.

Siens, see SIFTING, ETC.

SIFTING AND SEPARATING. XXXIV(4).

Fixed sieves. No case.

Hand sieves.

No case.

Miscellaneous—

Rotary frusto-conical members for classifying spherical bodies. 47423.

Pneumatic separators. 46506, 47794, 51269, 52311.

Reciprocating or oscillating sieves.

48346, 48999, 50644, 51103, 51337.

Rotary sieves. 50641, 51269, 51935.

screening apparatus, see Rotary, etc.

Separating by rotary pitted cylinders and between rotary rollers. 52116.

Sieves with compound motion.

No case.

Signal storage systems, electric, see ELECTRIC SIGNALLING, ETC.

Signalling systems, railway, see RAILWAY SIGNALS, ETC.

SIGNALS. MISCELLANEOUS. LI(4).

Audible signals, signalling by.

No case.

beacon lights being flashed in morse characters according to code arrangement for, see Visible, etc.

Boards for displaying announcements for and variable information.

No case.

Miscellaneous—

No case.

Road traffic, signalling apparatus for.

No case.

Shipping and marine purposes, signalling apparatus for. No case.

Signalling and advertising, monogramonic apparatus for (building up letters and signs by selective combination of elements).

No case.

SIGNALS. MISCELLANEOUS—contd.

Sounds, locating source and measuring intensity and velocity of.
No case.
Visible signals, signalling by.
47447.

Silicon nitride articles, moulding, see MOULDING, ETC.

Silicon nitride and silicon carbide refractories, see CEMENT, ETC.

Silos, see BUILDINGS, ETC.

Silos for cement or other powdery materials, see GRAIN, ETC.

Silos for grains, see BUILDINGS, ETC.

Sink and float and like differential density process of separating solid particles, see WASHING, ETC.

Sinks, see CLOSETS, ETC.

Sintering ores, see ORES, ETC.

Skins and hides, dehairing, see LEATHER.

Skirts, see DRESS, ETC.

Slabs, building and paving, see BRICKS, ETC.

Slack adjustors for brakes, see BRAKES, ETC.

Slag forming bodies for use in metal welding, see METAL WORKING.

Slag, recovering steel from, see IRON, ETC.

Slag wool, preparation of, see CEMENT, ETC.

Slags, treatment of, see CEMENT, ETC.

Slates, black-boards and like writing boards, see BOOKS, ETC.

Sleepers, railway, see RLY., ETC. PERMANENT, ETC.

Slicing machines, see COOKING, ETC.

Slide fasteners, see FASTENINGS, ETC.

Sliding bolts and latches, see FASTENINGS, ETC.

Sliding clasp fasteners, see FASTENINGS, ETC.

Slings for lifting and lowering, see LIFTING, ETC.

Sliver balling apparatus, see SPINNING.

Sliver condensers, conductors and conveyors, see SPINNING, ETC.

Silver irregularities, detecting and converting, see GAUGES, ETC.

Sliver rolling and balling, see SPINNING, ETC.

Slub catcher for yarn winding machine, see SPINNING, ETC.

Sludge, sewage, digesting and treating apparatus, see SEWAGE, ETC.

Sluice gates, see HYDRAULIC ENGINEERING, ETC.

SMALL ARMS AND MACHINE GUNS. XXXIX(6).

locking device in rifles, see Small arms, etc. (Construction, etc.)

machine guns, see Ordnance, etc.

Ordnance and machine guns, and carriages and mountings therefor.

48396, 48397, 51930, 52516.

Small arms (including gun-cases)—

Construction other than sights and sighting accessories.

47478, 47491, 49270, 50381, 50821.

Sights and sighting accessories.

46920.

Weapons, other than small arms and warfare teaching.

No case.

Smelting iron ores, see IRON AND STEEL, ETC.

Smelting metals other than iron, see METAL EXTRACTING.

Snap action electric switches, see ELECTRIC SWITCHES, ETC.

Snow deflector attachments for motor cars and other vehicles, see ROAD VEHICLES.

Soap powder blowers, see TOILET, ETC.

Soap, liquifying, pots see TOILET, ETC.

SOAPS AND CLEANSING, POLISHING AND ABRADING COMPOSITIONS (INCLUDING METAL POLISHES). XLIII(4).

Compositions containing materials other than metals, salts thereof and soaps.
50091, 50131, 51213, 51454.

Containing metals, oxides and salts thereof.

48456, 49542, 50131, 51454, 51619, 53248.

Polishing compositions for furniture, boots and other articles (including stains for wood).

No case.

SOAPS AND CLEANSING, ETC.—contd.

Soaps, and saponaceous compositions, containing fats and other saponifiable materials.

47261, 47283, 47428, 48339, 48360,
48525 48821, 48828, 49542, 49834,
49945, 50091, 50207, 50765, 51619,
51645, 51646, 52693, 53248.

Sockets couplings, electric, *see* **ELECTRIC COUPLINGS, ETC.**

Sodium aluminate compositions for making lake colours, *see* **CARBON COMPOUNDS, ETC.**

Sodium borate, *see* **CHEMICAL COMPOUNDS, ETC.**

Sodium nitrate, *see* **CHEMICAL COMPOUNDS, ETC.**

Sodium phosphate, *see* **CHEMICAL COMPOUNDS, ETC.**

Sodium salts, inorganic, *see* **CHEMICAL COMPOUNDS, ETC.**

Softening, rubber, *see* **INDIA RUBBER, ETC.**

Soil, compacting, *see* **EXCAVATING, ETC.**

Soil conditioning agent for improving plant growth *see* **MANURES, ETC.**

Soil stabilizing for road construction *see* **ROADS AND WAYS.**

Soils conditioning for cultivation with manures and other adetives, *see* **MANURES, ETC.**

Solar and natural heat. utilising for heating and power purposes, *see* **HEATING SYSTEMS, ETC.**

Solar cookers, *see* **COOKING, ETC.**

Solar heating devices, *see* **HEATING SYSTEMS, ETC.**

Soldering, *see* **METAL WORKING.**

Soles for boots and shoes, *see* **BOOTS AND SHOES.**

Solicyladehyde, obtaining by electrolytic process, *see* **ELECTROLYSIS, ETC.**

Solid fuels, *see* **FUEL, ETC.**

Solid materials, pulverizing, *see* **GRINDING, ETC.**

Solid particles dispersing in liquids to produce emulsions, *see* **CHEMICAL PROCESSES, ETC.**

Solids, fractionating of by flotation process, *see* **WASHING GRANULAR, ETC.**

Solvent extraction of fats and oils, *see* **FATS, ETC.**

Solvents for extracting metals from ores, *see* **METALS EXTRACTING, ETC.**

Solvents, volatile, recovering by evaporation or condensation, *see* **DISTILLING, ETC.**

Soot blowers or boiler tube cleaners, *see* **PIPES AND TUBES, ETC.**

Sound proof boards, *see* **HEATING SYSTEMS, ETC.**

Sound recorders and reproducers, magnetic, *see* **PHONOGRAPHS, ETC.**

Sound recording and reproducing apparatus, *see* **PHONOGRAPHS, ETC.**

Sound signalling devices electric current supply circuits for, *see* **ELECTRIC SUPPLY, ETC.**

Sound translating heads, optical and magnetic, *see* **PHONOGRAPHS, ETC.**

Sowing machines. *see* **AGRICULTURAL, ETC.**

Space decks, *see* **BUILDINGS, ETC.**

Space heating apparatus, *see* **HEATING SYSTEMS.**

Spanners, *see* **HANDTOOLS, ETC.**

Spark gaps for lighting arresters, *see* **ELECTRIC SUPPLY, ETC.**

Spark generators or igniters for explosive mixtures, *see* **AMMUNITION, ETC.**

Spark plugs for electric ignition systems of oil burners internal combustion engines and turbines, *see* **INTERNAL, ETC.**

Spark plugs for internal combustion engine, *see* **INTERNAL COMBUSTION, ETC.**

SPECTACLES AND EYEGLASSES. XXXVIII(4).

48572, 50063, 51122, 51929, 52393, 52935.
Speed indicators, *see* **FARES, ETC.**

Speed regulating mechanisms, *see* **GOVERNORS, ETC.**

Speed regulators or governors, *see* **GOVERNORS, ETC.**

Speedometers, *see* **FARES, ETC.**

Spermicidal compositions, *see* **DISINFECTING, ETC.**

Spermicide sponges, *see* **MEDICAL, ETC.**

Spindle adapters for record changers, *see* **PHONOGRAPHS, ETC.**

Spindle bearings, *see* **BEARINGS, ETC.**

Spindle driving mechanism, spinning, *see* **SPINNING, ETC.**

Spindles and flyers, *see* **SPINNING, ETC.**

Spindles, bearings for, see **BEARINGS, SPINNING AND TWISTING MACHINES, ETC.**

Spindles for electric motors, see **DYNAMO-ELECTRIC.**

Spindles for textile machines, see **SPINNING, ETC.**

Spinnerets for producing artificial filaments, see **CELLULOSE, ETC.**

SPINNING AND TWISTING MACHINES FOR PRODUCTION OF YARNS AND THREADS. XX.

(This heading does not include the formation of artificial filaments from viscous liquids which is indexed under CELLULOSE, ETC.)

anti-ballooning device, see **Spinning, etc.**

aprons, cots or the like element for drafting fibres, see **Preparation, etc.** (Drawing, etc.)

balance for determining ginning percentage of seed cotton, see **WEIGHING, ETC.**

bearing sleeve for spinning and doubling spindles, see **Spinning, etc.** (Driving, etc.)

blending of textile fibres, see **Miscellaneous.**

bobbin holders, see **Winding, etc.**

bobbins, marking, see **INDICATING, ETC.**

Bobbins, pirns, spools, reels, cops, balls and wound packages of thread, twine, thin wire and like, construction of.

47214, 47978, 48061, 49065, 49247, 49446, 50020, 51102, 51689, 52140, 52141, 52878, 53113.

breaking and drafting filaments, see **Miscellaneous processes, etc.**

building motions for yarn packages, see **Winding, etc.**

building up yarns into cheeses, see **Winding, etc.**

card clothings, grinding, see **POLISHING, ETC.**

carriers for condenser bobbins, see **Spinning, etc.** (Miscellaneous).

collectors for condensing fibres, see **Preparation, etc.** (Carding, etc.)

condensers for slivers or rovings, see **Preparation, etc.**

cones or fibrous containers for textiles, see **Miscellaneous, etc.**

controlling yarn manufacture, electrically, see **Miscellaneous, etc.**

cots aprons and the like for drafting fibres, see **Preparation, etc.** (Drawing, etc.)

cots for drafting see **Preparation, etc.** (Drawing, etc.)

cradles for drafting device, see **Preparation, etc.** (Drawing, etc.)

crimping fibres, see **Yarns, etc.**

crimping synthetic filaments, see **Yarns, etc.**

defiberizing husks mechanically, see **Preparation, etc.** (Decorticating, etc.)

drafting arrangements in preparatory machines, see **Preparation, etc.** (Drawing, etc.)

drafting arrangements in spinning machines, see **Spinning, etc.** (Spinning, etc.)

drafting fibres, see **Preparation, etc.** (Drawing, etc.)

drafting mechanisms for textile rovings, see **Preparation, etc.** (Drawing, frames).

drafting rollers means for retaining in spinning machines, see **Spinning, etc.** (Rollers, etc.)

drawing frames, see **Preparation, etc.** (Drawing, etc.)

drawing mechanism for fibre preparing machines, see **Preparation, etc.** (Drawing etc.)

drawing mechanism for spinning machines, see **Spinning, etc.** (Spinning, etc.)

end plugs for reels, see **Bobbins, etc.**

fibre laps, making, see **Carding, etc.**

fibre softening machines, see **Preparation, etc.** (Decorticating, etc.)

fibres, stripping from stalk, see **Preparation, etc.** (Decorticating, etc.)

fibres, treating with liquids, see **DYEING, ETC.**

fibrous material supplying to spinning machines, see **Miscellaneous.**

flexible materials, winding on spindles, see **Winding, etc.**

flyer draft systems, see **Spinning, etc.** (Spinning, etc.)

SPINNING AND TWISTING, ETC.—*contd.*

flyers, *see* Spinning, etc. (Spinning, etc.).
 grinding card clothings, *see* POLISHING, ETC.
 indicating unwinding tension for textile yarn packages, apparatus for, *see* INDICATING, ETC.
 illuminating threads, *see* Spinning, etc. (Miscellaneous).
 installations for the removal of broken threads in spinning machines, *see* Spinning, etc. (Spinning, etc.)
 marking wound bobbins, *see* INDICATING, ETC.
 measuring the unwinding tension from yarn package, apparatus for, *see* GAUGES, ETC.
 Miscellaneous processes and accessories for spinning yarns.—
 Assembling fibrous material. 52201.
 Blending fibres. 47870, 49053.
 Breaking and drafting filaments. 50948.
 Composite yarns and threads. 46558.
 Cones for textiles. 51044.
 Controlling yarn manufacture electrically. 48410.
 Spinning staple fibers. 49883.
 Stripping pirns. 51305.
 Suction devices for removing broken ends. 46702, 46703, 46704, 46705, 47948.
 Twistless yarns. 52157.
 mules, *see* Spinning, etc. (Spinning, etc.).
 neps and other defects in fibrous textile materials, apparatus for displaying, *see* Preparation, etc. (Miscellaneous).
 packaging yarns and filaments, *see* Winding, etc.
 polishing yarns, *see* Yarns, etc.
 Preparation of fibrous materials for spinning—
 Carding engines (including apparatus for lap forming and balling sliver). 47064, 48126, 48391, 48455, 48696, 48944, 48985, 50142, 50498, 50652, 50812, 51225, 51778, 51900, 52428, 52486, 52684, 52774, 52989, 53146.
 Combing machines. 51772.
 decorticating, breaking, scutching and opening apparatus or flax, hemp,

SPINNING AND TWISTING, ETC.—*contd.*

Preparation of fibrous, etc.—*contd.*
 cotton and wool fibres. 49400, 49884, 50283, 50430, 50994, 52040, 52187, 52698.
 Drawing frames.
 46527, 46699, 46757, 47408, 47764, 47949, 48088, 48089, 48126, 48127, 48172, 48276, 48421, 48422, 48517, 48808, 48813, 48866, 48951, 48969, 49156, 49257, 49826, 50142, 50709, 50823, 51021, 51354, 52216, 52495, 52496, 52593, 52922, 53169, 53171.
 Feeding apparatus for openers, scutchers, carding engines and like. 48109, 49052, 51714, 52877, 52898.
 Gill boxes. 51322.
 Gins and burring apparatus. 51432, 52897, 52898.
 Heckling machines. No case.
 Miscellaneous—
 Cleaning cotton. 51959.
 Neps and other defects in fibrous textile materials apparatus for displaying. 50390.
 Rolling device for carded fleece. 51056.
 reducing or condensing fibers, *see* Preparation, etc. (Carding, etc.).
 reels or bobbins, *see* Bobbins, etc.
 rings for ring spinning and doubling frames, *see* Spinning, etc. (Miscellaneous, etc.).
 roller weighting means, *see* Spinning, etc. (Rollers, etc.).
 rollers for breaking yarns, *see* Spinning, etc. (Rollers, etc.).
 sliver balling apparatus, *see* Preparation, etc. (Carding engines, etc.).
 sliver condensers, conductors and conveyors, *see* Preparation, etc. (Carding, etc.).
 sliver irregularity detecting and converting, *see* GAUGES, ETC.
 sliver rolls, forming, *see* Preparation, etc. (Carding, etc.).
 slub calchchers for yarn winding machines, *see* Winding, etc.
 spindle mounting for, *see* Spinning, etc. (Driving, etc.).

SPINNING AND TWISTING ETC.—*contd.*

Spinning and twisting machines.—

Creels and like feeding and delivery apparatus. 46566.

Doffing, bobbin and tube applying, and like apparatus for spinning, twisting, winding and like machines.

No case.

Driving and stoppping apparatus (non-automatic) including spindles and their appatenances, driving and stopping apparatus.

46541, 46788, 47633, 48119, 48240
48635, 49970, 50563, 50675, 51014,
51831, 53345.

Miscellaneous—

Bobbin carriers. 47127.

Illuminating device for threads. 47204.

Rings for ring spinning and doubling frames. 46966.

Supplying fibrous materials to spinning machines. 51068.

Mules and twiners (including all spinning, doubling and twisting machines of intermittent type). 51207.

Rollers and roller heads. 46786,
46848, 47008, 48335, 48941, 49322,
49372, 49859, 50741, 50905, 50973,
51899, 52365, 53306.

Roving and thread guides, tension arrangements and roller beams (other than clearing apparatus and creel arrangement). 48296, 50904.

Spinning and twisting machines of Continuous type, and types, and kinds of. 47949, 48255, 48476, 48891, 48928, 49018, 49273, 49284, 49883, 50055, 50179, 50794, 51330, 51354, 51679, 52447, 52496, 52712, 52789, 52921, 52922, 53151, 53170.

Stop motions (including delivery, stopping). 49121, 49401, 49485, 49738, 50533.

stripping waste from bobbing pirns, spools and tubes, see Miscellaneous, etc.

suction device for removing broken ends, see Miscellaneous, etc.

supporting and loading rollers, see Spinning, etc. (Roller, etc.).

synthetic fibers, crimping, see SPINNING, ETC.

textile threads examining apparatus, see Yarns and threads, etc.

SPINNING AND TWISTING, ETC.—*concl'd.*

thread and yarn braking devices, see Winding, etc.

turbine drives for spindles, see TURBINES, ETC.

twistless yarns, see Miscellaneous, etc.

weighting arrangements, for rollers, see Spinning, etc. (Rollers, etc.).

winding laps in scutchers and the like machines, see Preparation, etc. (Carding, etc.).

Winding (other than construction of) bobbins, spools, cops, hanks, and balls of yarns, threads, cords ropes, wire and the like.

47049, 47080, 47171, 47199, 47763,
47956, 47855, 48891, 48942, 48944,
49004, 49246, 49406, 49592, 50844,
51040, 51195, 51721, 52588, 52955,
52999, 53176.

yarn package building, see Winding, etc.

Yarns and threads, finishing, dressing and testing and inspecting.

48291, 50465, 51542, 51946, 52057,
52171, 52358, 53185, 53258.

yarns and threads, processing by liquid treatment, see DYEING, ETC.

yarns, winding, see Winding, etc.

Spinning artificial filaments, see CELLULOSE, ETC.

Spinning synthetic polymers, see CELLULOSE, ETC.

Spiral gear pumps, see ROTARY ENGINES, ETC.

Sponge rubber, see INDIA RUBBER, ETC.

Spools or reels for threads and wires, see SPINNING, ETC.

Sporting rifles, see SMALL ARMS, ETC.

Spray painting machines, see PAINTS, ETC.

SPRAY PRODUCERS AND SPRINKLERS. XXIX(2).

(The nozzles indexed here are those of general and unspecified application spray producers and nozzles applicables, solely to particular purposes are indexed under headings denoting such purposes, such as BURNERS FURNACES; carburetters (INTERNAL COMBUSTION ENGINES).

SPRAY PRODUCERS, ETC.—contd.

containers for insecticide, spraying equipments, *see* HOLLOW WARE, ETC.

Design of jets nozzles, spreaders and atomisers. 47572, 48226, 48759, 49913, 49928, 50018, 50829.

pistol device atomising viscous materials, *see* Design, etc.

powder spreaders, *see* Spraying, etc.

Spraying and sprinkling machines, general design of (other than construction of jets and nozzles). 46691, 47226, 47234, 48225, 48227, 48428, 48557, 48707, 49917, 50018, 50056, 50366, 50506, 50586, 50646, 50829, 51418, 51908, 51984, 53155, 53388, 53423.

Spring assemblies, packing, *see* PACKING, ETC.

Spring upholstery, *see* FURNITURE.

Springs, making, *see* METAL WORKING.

Sprinklers, *see* SPRAY PRODUCERS, ETC.

SPRINGS AND VIBRATION DAMPERS. LII(4).

buffers, hydraulic and pneumatic spring, *see* Pneumatic, etc.

Buffers, resilient-shackles and other arrangements of springs with mountings complete in themselves (other than railway vehicle buffers).

48680, 52075.

Cushioning devices of general and unspecified application (including both system and arrangement of springs, and devices other than springs).

47129, 48013, 48147, 49979, 50289, 51078, 51455, 51474, 51578, 51955, 52075.

fluid friction vibration dampers or shock absorbers, *see* Pneumatic, etc.

friction shock absorbers with springs and mountings complete in themselves, *see* Buffers, etc.

Gaiters and other detachable covers.

No case.

hydraulic shock absorbers, *see* Pneumatic, etc.

Metallic springs, construction form and mounting of. 46571.

Non-metallic materials, composed, wholly or mainly of. 47073, 47129, 49192.

SPRINGS AND VIBRATION, ETC.—contd.

packing spring assemblies for storage and transit, *see* PACKING, ETC.

Pneumatic and hydraulic springs, cata-racts, dashpots and fluid friction vibration dampers.

46938, 47245, 48338, 49509, 49653, 50278, 50279, 50401, 50570, 51043, 52959.

resilient suspensions for road vehicle axle assemblies, *see* ROAD VEHICLES.

resilient suspension systems, *see* Cushioning, etc.

resilient torsion joints, *see* Cushioning, etc.

shock absorbers other than fluid friction, [for cycle and like vehicle using rubber elements], *see* Vibration, etc.

shock absorbers for railway buffers, cushioning units for, *see* Cushioning, etc.

shock absorbers, hydraulic, *see* Pneumatic, etc.

steam and other fluid pressure hammers and passes, *see* HYDRAULIC PRESSES, ETC.

valves for hydraulic stock absorbers, *see* VALVES, ETC.

Vibration dampers (other than fluid friction). 46822, 47073, 52585, 52750.

vibration damping arrangements for machinery, special, *see* Separate headings like MECHANISM MISC. DYNAMO ELECTRIC, ETC.

Squeeges for stencil printing, *see* PRINTING.

Stabilizing food, *see* FOOD, ETC.

Stacking and conveying materials apparatus for, *see* LIFTING, ETC.

Stalks, separating from tea leaves, *see* SIFTING, ETC.

Stranding or twisting cables, *see* METAL WORKING.

Stands for lamps, *see* LAMPS FOR LIGHTING, ETC.

Stands, racks, and brackets, *see* FURNITURE.

Starch, *see* ADHESIVES, ETC.

Start-stop telegraph system, *see* TELEGRAPHS, ETC.

Starting arrangements for internal combustion engines, *see* INTERNAL COMBUSTION, ETC.

Starting circuits for electric discharge lamps, *see* ELECTRIC SUPPLY, ETC.

Static electric switching circuits for telephone systems, *see* TELEPHONES, ETC.

Statistical machines, *see* CALCULATING, ETC.

Statistical record controlled calculating machines, *see* CALCULATING, ETC.

Stators for electric motors generators and like, *see* DYNAMO-ELECTRIC, ETC.

Steam boilers, *see* STEAM GENERATORS.

STEAM ENGINES AND ENGINE DETAILS. XLV(3).

Connecting rods, crossheads, eccentrics, eccentric rods, and guides, engines and like. No case.

Cylinders. No case.

Distributing and expansion valves and valves gear and valve actuating arrangements.
47357, 47448.

Flywheels. No case.

gaskets and like sealing means, *see* Joint, etc.

General design of steam engines and details, not other wise provided for.
No case.

internal combustion engine pistons and piston rods construction of, *see* Pistons etc.

Joint making packing. 50095, 50736, 52277, 53209.

Miscellaneous. No case.

Pistons and piston rods (including packing therefor).
48532, 49688, 50050, 50610, 52396.

Regulating, controlling, starting, stopping and reversing steam engines.
No case.

sealing devices for relatively fixed members, *see* Joints packed, etc.

Steam separators. 47788, 49827, 52471, 52584.

valves and valve gears for, *see* Distributing, etc.

Vapour and vacuum engines.
No case.

STEAM GENERATORS. XLV(4).

antifoaming compositions, *see* Miscellaneous.

ash disposal means, *see* FURNACES, ETC.

ash removing apparatus for boilers, *see* FURNACES, ETC.

Blow down apparatus (including surface blow off apparatus).

No case.

boosting steam temperature otherwise than by superheating, *see* Heating, etc.

conditioning water to prevent formation of foam, *see* Miscellaneous.

Drums, mud, steam, and water and like chambers, shells and barrels and tube plates.

47358.

feed water heaters, *see* HEATING SYSTEMS, ETC.

feed water pumps for, reciprocating piston type, *see* PUMPS, ETC.

Feed water, supplying and controlling.
47333, 47886.

Fire boxes (locomotive and vertical boiler type).

No case.

Flues (both internal and external) and tubes, smoke, flame fire and like, and settings.

47246, 53361.

furnace tubes protecting from scales, dust and dirt, *see* Flue, etc.

gas turbine exhaust heated steam generation equipment, *see* TURBINES, ETC.

General design of (arrangement and disposition of tubes, etc.).

47358, 48970, 49104, 49220, 50826, 51606, 52818.

Heating. 49647, 50116, 53148, 53330, 53360.

Joints, jointing and connections (including expansion hooks and rings).
52818.

Miscellaneous—

Inhabiting foaming. 47968, 46686.

safety valves, Construction of, *see* VALVES, ETC.

Smoke-boxes. 52932.

smokestacks for producing draft, *see* CHIMNEYS, ETC.

STEAM GENERATORS—contd.

- Stays and staying.
- No case.
- steam separators, *see* STEAM ENGINES, ETC.
- Tubes, water, construction of.
49220, 51750.
- tubulous boilers, *see* General design, etc
- tubulous vapour generators, *see* General design, etc.
- Valves, application and arrangement of.
47333.
- Water circulation, auxiliary apparatus for promoting.
- No case.
- Steam, hot water and like cooking apparatus, *see* COOKING, ETC.
- Steam separators, *see* STEAM ENGINES, ETC.

STEAM SUPERHEATERS. XLV(5).

- boosting steam temperature, *see* Miscellaneous.
- Chambers, heated by combustion gases.
50826.
- Coiled and sinuous tube apparatus and straight tube apparatus (other than fire and smoke tube apparatus).
- No case.
- Fire and smoke tube apparatus.
47153.
- Miscellaneous---
 - Boosting and Controlling steam temperature. 49647, 53330.
- Mounting and supporting.
- No case.
- Steam valves, arrangement of.
- No case.
- Steel alloys, *see* ALLOYS.
- Steel bars, twisting, *see* METAL WORKING.
- Steel making and purifying *see* IRON AND STEEL, ETC.
- Steel plating with oils to modifying its surface, *see* PAINTS, ETC.
- Steels, alloy, *see* ALLOYS.
- Steering mechanisms for cycles, *see* CYCLES, ETC.
- Stencils copying, *see* PRINTING.
- Stenciling machines, *see* PRINTING.

Step-by-step driving mechanisms electrical actuating means for, *see* ELECTRIC SUPPLY, ETC.

Step-by-step linear driving, mechanisms, *see* MECHANISM, MISCELLANEOUS.

Stereograms, apparatus for photographing, *see* PHOTOGRAPHY.

Stereophonic sound reproduction from cinema film apparatus for, *see* PHONOGRAPHS, ETC.

Stereoscopic cameras, *see* PHOTOGRAPHY.

Sterilizing and preserving by radiations, *see* CHEMICAL PROCESSES, ETC.

Steroids, *see* CARBON COMPOUNDS, ETC.

Steroid compounds, *see* CARBON COMPOUNDS, ETC.

Sterols, *see* CARBON COMPOUNDS, ETC.

Stilbyl tiazole compounds, *see* CARBON COMPOUNDS, ETC.

Stokers, mechanical, *see* FURNACES, ETC.

Stomach powders, *see* DISINFECTING, ETC.

Stone crushers, *see* GRINDING, ETC.

STONE CUTTING AND WORKING. XXV(3).

(*Excepting boring earth and rock, see* MINGING; EXCAVATING).

48852, 48870.

stone and surfaces cleaning, by impact tools, *see* POLISHING, ETC.

STOPPERING, FILLING AND OPENING, BOTTLES, JARS, AND LIKE VESSELS. XL(6).

(*In the heading the apparatus includes also methods depending on such apparatus.*)

Apparatus for applying closures and closure devices.

48148, 49299, 49699, 33461.

Bottling (including filling cans and tubes with liquids and opening and funnels for liquids).

46645, 47282, 47702, 49820, 50155.

Capsules closely conforming to receptacle neck, and capsule like closures.

47093, 49740, 50139, 50582, 51210, 51933, 51947, 52807, 52827, 53239.

STOPPERING, FILLING, ETC.—*contd.*

clamping ring closures, *see* Miscellaneous.

closure flanges for screw-plug stoppers, *see* Mechanical, etc.

closure seals, *see* Miscellaneous.

cork screws, *see* Bottling, etc.

detachably mounted apparatus for dispensing contents from containers, *see* Stoppers, etc.

Downwardly seated closures held in position by other means than auxiliary mechanical devices.

46886, 47822, 48528, 49699, 50732, 52269, 52295, 53106, 53237.

Mechanical retaining devices disposed in or outside and coacting with neck of receptacles, stoppers seated by.

47681, 48141, 48347, 48867, 49506, 49865, 50572, 51569, 52299.

metallic closures for bottles making, *see* METAL WORKING, ETC.

Miscellaneous—

Clamping ring closures. 53083.

Closures with sealing pads. 51757, 51758, 51762, 51763, 51931, 51932, 51933, 51947, 51948.

rim gripping closures for containers, *see* Capsules, etc.

sealing pads for closure seals, *see* Miscellaneous.

screw-plug stoppers engaging screw-threads in receptacles or fittings therein, *see* Mechanical, etc.

Stoppers adapted to act as or fitted with devices to facilitate discharge of contents or admission of liquids and gases.

46884, 47163, 48141, 49997, 50378, 50646, 51517, 51792, 51852, 52249.

Stoppers for bottles, etc. *see* STOPPERING, ETC.

Storage bins for granular, pulverulent and fluent solid materials in general, *see* BUILDINGS, ETC.

Storage device for documents, piles, folders, books, *see* FURNITURE.

Storing articles books and the like, apparatus for, *see* LIFTING, ETC.

Storm lanterns, *see* LAMPS FOR LIGHTING, ETC.

Stoves, electric, *see* HEATING BY ELECTRICITY.

STOVES, RANGES AND FIRE PLACES. XV(2).

(This heading includes only apparatus for producing heat by consumption of wood, coal, oil or gas for domestic purposes.)

49020, 49663, 49809, 50011, 51132, 52387.

burners construction of, *see* BURNERS, ETC.

burners for stoves, *see* BURNERS.

pumps heat operated, for feeding fuel under pressure, *see* BURNERS, ETC.

wick regulating means for, *see* BURNERS, ETC.

Strainers for tubewells, *see* FILTERING, ETC.

Street lights, *see* LAMPS FOR LIGHTING.

Stretching cords, *see* ROPES, ETC.

Stretching yarns, and threads, *see* SPINNING, ETC.

Stringed instruments, musical, *see* MUSIC, ETC.

Strip, feeding devices, *see* WEBS, ETC.

Strips or bands, *see* ROPES, ETC.

Structures, *see* BUILDINGS, ETC.

STUFFING BOXES. XLV(6).

46520, 46696, 48044, 48253, 48583, 49447, 49743, 50481, 51059, 52313.

oil seal for reciprocating members, *see* LUBRICATING.

Subscriber line equipments for automatic telephone exchanges, *see* TELEPHONES, ETC.

Subsoilers, cultivating, *see* AGRICULTURAL, ETC.

Suction cleaners, *see* AIR AND GASES, ETC.

Suction device for removing broken ends of yarns, *see* AIR, ETC.

SUGAR. XVII.

(Steps in process in sugar manufacture involving improvements in connection with distilling, evaporating, drying electrolysis filtering, grinding and crushing, mixing and agitating, and sifting are indexed under headings denoting such operations.)

cane juice extracting, *see* XX Extracting, etc.

SUGAR—contd.

- centrifugal machines, *see* CENTRIFUGAL, ETC.
- clarifying raw cane juice, *see* Purifying, etc.
- classifying cane juice, *see* Purifying, etc.
- Extracting sugar from raw materials, other than purifying and refining processes. 51400, 52167.
- Glucose, maltose, lactose and like. 46575, 46576, 48719, 51575.
- massecuites, reheating for separation from molasses, *see* Purifying, etc.
- Miscellaneous—
- Improving whiteness of sugar. 47380.
- Sugar floss. 49891.
- Sweetening compositions. 53123.
- Purifying saccharine liquids and refining sugar.
- 46554, 46621, 46951, 47227, 48795, 49384, 50228, 50604, 50845, 51070, 51164, 51204, 51257, 51753, 52071, 52758.
- Sugar cane crushers, *see* GRINDING, ETC.
- Sugar cane harvestors, *see* AGRICULTURAL, ETC.
- Sugar cane mills, *see* GRINDING, ETC.
- Sugar juice, clarifying by electrolytic methods, *see* ELECTROLYSIS, ETC.
- Sulphamic aromatic, acids, *see* CARBON, ETC.
- Sulphates, metallic, *see* CHEMICAL COMPOUNDS, ETC.
- Sulphonamides and sulphonamide derivatives, *see* CARBON COMPOUNDS, ETC.
- Sulphonamido isoxazole derivatives, *see* CARBON COMPOUNDS, ETC.
- Sulphonated polyethers, *see* CARBON COMPOUNDS, ETC.
- Sulphur, *see* NON-METALLIC, ETC.
- Sulphur dioxide, *see* CHEMICAL COMPOUNDS, ETC.
- Sulphur dyes, *see* CARBON COMPOUNDS, ETC.
- Sulphur-oxides, *see* CHEMICAL COMPOUNDS, ETC.
- Sulphuric acid, *see* CHEMICAL COMPOUNDS, ETC.
- sulphuric acid, electrolytic process for preparing, *see* ELECTROLYSIS, ETC.
- Sulphuric esters of polysaccharides, *see* CARBON COMPOUNDS, ETC.
- Surface apparatus for transfer of heat, *see* HEATING SYSTEMS, ETC.
- Surfacing or plastering, *see* BUILDINGS, ETC.
- Surgical and medical appliances, *see* MEDICAL, ETC.
- Surgical casts, *see* MEDICAL, ETC.
- Surgical dressings, *see* MEDICAL, ETC.
- Surgical operation tables, *see* MEDICAL, ETC.
- Suspending electric cables and conductors, *see* CONDUCTORS, ETC.
- Swaging metal, *see* METAL WORKING.
- Sweeping or brushing, *see* BRUSHING, ETC.
- Switch board structures, *see* ELECTRIC SWITCHES, ETC.
- Switch gear, electric, *see* ELECTRIC SWITCHES, ETC.
- Switches for railways and tramway, *see* RAILWAY, ETC. PERMANENT, ETC.
- Switching arrangements for electric signalling systems, *see* ELECTRIC SIGNALING, ETC.
- Switching arrangements for telephones exchanges, *see* TELEPHONES, ETC.
- Synchronising arrangements for telegraph systems, *see* TELEGRAPHS, ETC.
- Synchronising units for projectors and sound reproducers, *see* PHONOGRAPHS, ETC.
- Synchronous motors and generators, *see* DYNAMO-ELECTRIC, ETC.
- Synthetic fibres and filaments, *see* CELLULOSE, ETC.
- Synthetic linear polymers, spinning, *see* CELLULOSE, ETC.
- Synthetic rubber compositions, *see* INDIA RUBBER, ETC.
- Synthetic tanning materials, *see* LEATHER.
- Synthetic threads, *see* CELLULOSE, ETC.
- Syringes and other piston diaphragm and like apparatus for discharging liquids from receptacles, *see* WATER, ETC., RAISING, ETC.
- Syringes, hypodermic, *see* MEDICAL, ETC.
- Syringes, medical, *see* MEDICAL, ETC.
- Syringes, pumps and like appliances, surgical and medical, *see* MEDICAL ETC.

T

TABLE ARTICLES. LVI(8).

(This heading includes table articles like cosies, drinking vessels, egg cups, flower holders, napkins, spoons, plates, dishes, saucers and trays.)

49872.

Table calendars, *see* BOOKS, ETC.

Table jelly, *see* FOOD, ETC.

Tablets, making moulding, *see* MOULDING, ETC.

Tablets, medicinal, *see* DISINFECTING, ETC.

Tablets, milk, *see* FOOD PREPARING, ETC.

Tablets, pharmaceutical, *see* DISINFECTING, ETC.

Tamarind seeds, baking, *see* GRAIN, ETC.

Tamping machines for railways, *see* RAILWAY, ETC., PERMANENT, ETC.

Tampons menstrual, *see* MEDICAL, ETC.

Tampons, surgical, *see* MEDICAL, ETC.

Tampons, wads and the like for medical and surgical uses, *see* MEDICAL, ETC.

TANKS AND CISTERNS. XXVIII(5).

48035, 48450, 48682, 48812, 50038, 50789, 51480, 52016, 52147, 52271.

Tanning leather, *see* LEATHER.

Tanning materials, *see* LEATHER.

Tanning, skins, *see* LEATHER.

Tapes, coating with adhesives, *see* PROOFING, ETC.

Tappets and cams, *see* MECHANISM MISCELLANEOUS.

Taps, water, *see* VALVES, ETC.

Tartaric acid, *see* CARBON COMPOUNDS, ETC.

Taximeters, *see* FARES, ETC.

Tea leaves, plucking, *see* AGRICULTURAL, ETC.

Tea leaves, withering, *see* DRYING, ETC.

TEA MANUFACTURE. XVIII.

(Steps in processes for tea manufacture involving improvements in connection with cooling, drying, grinding and crushing, mixing, separating or sorting and sifting are indexed under headings denoting such operations).

TEA MANUFACTURE.—contd.

Breaking or cutting tea.

47334, 47876, 49139, 49370, 50117.

Fermenting tea. 52841.

freezing and thawing of leaf, *see* Miscellaneous.

infusions, tea, coffee and like, apparatus for making, *see* DECOCTIONS, ETC.

Miscellaneous.—

Freezing and thawing. 47828, 47829.

Rolling—

Caps, cylinders and pressure regulating means and like upper elements of horizontal rollers. 49564.

Rollers and crushers, other than horizontal. 49139.

Tables, doors and like lower elements of horizontal rollers (including drying gear). 50655, 51390, 51391.

Temperature control devices for rollers. No case.

Tea, coffee and cocoa preparations and substitutes. 46745, 47236, 48082.

withering or drying moving trays for, *see* DRYING, ETC.

Teaching or educational appliances, *see* BOOKS, ETC.

Telecontrol devices for radio and television receivers, *see* WIRELESS, TEC.

Telegraph receivers receiving high frequency, *see* WIRELESS, ETC.

Telegraphic relays electromagnetic, *see* ELECTRIC SWITCHES, ETC.

TELEGRAPHS, ELECTRIC. LXI(1).

arrangements for measuring distortion in code signals, *see* Code, etc., (Systems, etc.).

Artificial lines, attenuation equalisers, filter circuits and other impedance networks for dealing with telephone and other complex currents.

46550, 46717, 46768, 47154, 47295, 47307, 47485, 47486, 47511, 47697, 48077, 48219, 48506, 49469, 49614, 50624, 50880, 50934, 50959, 51192, 51287, 51404, 51702, 52411, 52814, 52908, 53339, 53340.

attenuator networks, *see* Artificial lines, etc.

balancing networks for cables, *see* Artificial, etc.

TELEGRAPHS, ETC.—contd.

carrier telephony filter housings, *see* Artificial lines, etc.

Code telegraphy—

Diplex, duplex and multiplex systems.
46750, 46751, 49602, 49733.

Portable or field sets.

No case.

Receivers, construction of.

No case.

Systems and apparatus other than receivers, relays, transmitters and diplex and like systems.

49607, 49800, 50124, 50544, 52277, 52289.

Transmitters, construction of.

No case.

crimping telegraph storage tapes, device for, *see* Code, etc. (Systems, etc.)

electric net works and bridge circuits, *see* Artificial, etc.

Electric synchronous movements and synchronism indicators. 52957.

enciphering devices, *see* Code, etc., (Systems, etc.).

facimile recorders, *see* Television, etc.

facimile scanning devices, *see* Television, etc.

facimile telegraph transmission, systems, *see* Television, etc.

filter, rejector, separator and tuned circuits, construction and design of (including couplings or frequency filters utilising mechanical resonance elements, *see* Artificial lines, etc.

filters, electro magnetic vibrators for, *see* DYNAMO, ETC.

half-duplex telegraph system, *see* Code telegraphy, (Diplex, etc.).

impedance networks or combinations for dealing with telephone and other complex currents, *see* Artificial lines, etc.

impedance transformers, *see* Artificial lines, etc.

multichannel voice frequency alternating current telegraph system, *see* Code telegraphy, (Diplex, etc.).

networks, electric, *see* Artificial lines, etc.

TELEGRAPHS, ETC.—contd.

optical systems for television cameras, *see* Television, etc.

photo-electric scanning devices, *see* Television, etc.

printing telegraph apparatus, *see* Typewriting, etc.

pulse discriminators other than those using thermionic valves, *see* Artificial lines, etc.

receiving combiners for teleprinters, *see* Typewriting, etc.

relays, electromagnetic, *see* ELECTRIC SWITCHES, ETC.

repeaters, housings for, *see* Code, etc. (Systems, etc.).

Selenium cells and light valves in which electric and magnetic stress produces optical effects. No case.

start-stop telegraph systems, *see* Typewriting, etc.

step by step feed mechanism for teleprinters, *see* Typewriting, etc.

synchronising arrangement for telegraph systems, *see* Electric, etc.

tape operating devices for teleprinter, *see* Typewriting, etc.

teleprinters, *see* Type writing, etc.

Television and copying and writing telegraphy.

46852, 47144, 47158, 47180, 47189,
47514, 47515, 47739, 47939, 48926,
49067, 49083, 49361, 49512, 50123,
50281, 50369, 50444, 50445, 50496,
50543, 50708, 50882, 51096, 51297,
51730, 51731, 51886, 51901, 52092,
52143, 52468, 52907, 53004, 53005,
53264, 53406, 53451, 53452.

television-pick-up tubes, *see* VACUUM, ETC.

television pictures, apparatus for optically projecting on screens, *see* PHILOSOPHICAL, ETC.

transducer for recording, erasing and reproducing television signals, *see* Television, etc.

Typewriting telegraphy.

47928, 48653, 49114, 49115, 49241,
49496, 49602, 50033, 50824, 50955,
51107, 51116, 52073, 52154, 52947.

voltage control systems for power supply circuits of telecommunication systems, *see* ELECTRIC SUPPLY, ETC.

TELEGRAPHS, ETC.—contd.

volume control means for audiofrequency television, and like thermionic amplifiers, *see* **WIRELESS, ETC.**

wave, distorting networks, electric, *see* **Artificial, etc.**

Telephone cables, *see* **CONDUCTORS, ETC.**

TELEPHONES AND TELEPHONE SYSTEMS, ELECTRIC. LXI(2).

automatic control means for telephone switching devices, *see* **Telephone, etc., auto, etc., (Inter exchange, etc.).**

automatic signalling circuits for telephone exchanges, *see* **Telephone exchange, etc., automatic, etc., (Inter exchange, etc.).**

automatic telephone exchanges, *see* **Telephone exchange, etc., automatic, etc. (Inter exchange, etc.).**

automatic telephone switching and signalling circuits devices, *see* **Telephone exchange, etc., automatic, etc., (Inter exchange, etc.).**

channel terminating units for telephone exchanges, *see* **Telephones, etc., automatic, etc., (Inter exchange, etc.).**

circuits for automatic selection of free telephone lines, *see* **Telephone, etc., automatic, etc., (Inter exchange, etc.).**

contact strips, construction of, *see* **ELECTRIC SWITCHES, ETC.**

containers for loading coils, *see* **Transmission, etc.**

controlling dictating machines in auto or semiauto exchange by remote signalling systems, *see* **Telephone exchange, etc., manual, etc., (Inter exchange, etc.).**

controlling dictating machines in manual exchange by remote signalling systems, *see* **Telephone, etc., automatic, etc., (Inter exchange, etc.).**

converting equipments for telephone trunk lines, *see* **Transmission, etc.**

cross-bar type switches, *see* **Electric selector, etc.**

device for complying microphone and earpiece of telephone sets, *see* **Telephone instruments, etc., (Sets).**

digits or numbers receiving and displaying at operator's position, apparatus for, *see* **Telephone exchange, etc. (Inter exchange, etc.).**

TELEPHONES, ETC.—contd.

electric contact springs, making, *see* **METAL WORKING.**

electric gas discharge tube circuits for interconnection in automatic telephone exchanges, *see* **Telephone, etc., automatic, etc., (Inter exchange, etc.).**

electric lamps, incandescent, for telephone switch board, *see* **ELECTRIC LAMPS, ETC.**

Electric selector switches for telephones.
46940, 46957, 46958, 47055, 48097,
48383, 49238, 49294, 49629, 50528,
51478, 51764, 52531, 52667, 52683,
52723, 53075.

electronic translating circuits for automatic telephone circuits, *see* **Telephone exchange, etc., automatic, etc., (Inter exchange, etc.).**

fee recording equipments for automatic telephone systems, *see* **Telephone exchange, etc., automatic, etc., (Meters and etc.).**

identification or selection equipment for automatic telephone exchanges, *see* **Telephone exchange, etc., automatic, etc., (Inter exchange, etc.).**

Impulse transmitters set by hand for transmitting variable numbers of electric currents in regular trains.

No case.

intelligence storage devices for automatic telephone exchanges, *see* **Telephone exchange, etc., automatic, etc., (Inter exchange, etc.).**

line identification equipment for automatic telephone systems, *see* **Telephone exchange, etc., automatic etc., (Meters, etc.).**

line switching units automatic telephone exchange, *see* **Telephone exchange, etc., automatic, etc., (Inter-exchange, etc.).**

loading coil containers, *see* **Transmission, etc.**

loading coils arrangement of, *see* **Transmission, etc.**

loading coils for telephone circuits, *see* **Transmission, etc.**

loudspeakers, *see* **Telephone instruments, etc., (Magnetic, etc.).**

loudspeakers and microphones, moving coil type, *see* **Telephone instruments, etc., (Magnetic, etc.).**

TELEPHONES, ETC.—contd.

- magnetic storage equipments responsive to dialled and recorded impulses, *see* Telephone exchange, etc., automatic etc., (Inter exchange, etc.).
- metering arrangements for automatic telephone circuits, *see* Telephone exchange, etc., automatic, etc., (Meters, etc.).
- moving coil loudspeakers, *see* Telephone instruments, etc., (Magnetic, etc.).
- multichannel transmission systems, *see* Transmission, etc.
- pulse generating apparatus for exchanges, *see* WIRELESS, ETC.
- register translator circuits, *see* Telephone exchange, etc., automatic, etc., ('ᵛᵗᵃ 'əʒnəʊəxə ʒəʔnɪ)
- registering telephone fees by metering pulses in automatic exchanges, *see* Telephone exchange, etc., automatic, etc., (Meters, etc.).
- selective systems for automatic telephone exchanges, *see* Telephone, etc., automatic, etc., (Inter exchange, etc.).
- selector switches, *see* Electric selector, etc.
- signalling devices for Telephone transmission systems, *see* Transmission, etc.
- signals supervisory and selection sending over the transmission paths of automatic exchanges, means for, *see* Telephone, etc., automatic, etc., (Inter exchange, etc.).
- spring sets for selector switches, *see* Electric selector, etc.
- step-by-step selector switches, *see* Electric selectors, etc.
- storing intelligence in automatic telephone exchanges, *see* Telephone, etc., automatic, etc., (Inter exchange, etc.).
- subscribers apparatus or telephone sets, *see* Telephone instrument, etc., (Sets).
- subscribers line equipment for automatic telephone exchanges, *see* Telephone, etc., automatic, etc., (Inter exchange, etc.).
- Switch boards, electric incandescent lamps for, *see* ELECTRIC LAMPS, ETC.
- switching arrangements for automatic telephone exchanges, *see* Telephone exchange, etc., automatic, etc., (Inter exchange, etc.).

TELEPHONES, ETC.—contd.

Telephone exchange systems automatic and semi-automatic—

Inter exchange working.

46459, 46640, 46734, 46770, 46810,
46842, 47343, 47344, 47345, 47346,
47475, 47604, 47753, 47754, 47755,
47756, 48069, 48079, 48509, 48787,
48805, 48909, 48910, 48911, 48996,
49111, 49113, 49222, 49238, 49528,
49588, 49607, 49625, 49626, 49627,
49830, 49959, 50017, 50234, 50285,
50446, 50671, 50690, 50738, 50754,
50799, 50834, 50835, 50836, 50837,
50838, 51025, 51087, 51100, 51309,
51310, 51311, 51708, 51789, 51821,
51822, 51939, 51957, 51970, 52104,
52118, 52126, 52154, 52182, 52183,
52278, 52279, 52378, 52410, 52412,
52667, 52812, 52813, 52830, 52831,
52960, 53224, 53257, 53431.

Meters and metering, etc.

49112, 49325, 49628, 50234, 52263.

Miscellaneous—

No case.

Party line systems. No case.

Telephone exchange systems, manual—

Exchange switch boards and switch board equipment construction and arrangement of.

No case.

Inter-exchange working. 49959, 52960.

Meters, time indicators and metering systems.

No case.

Miscellaneous. No case.

Party line systems. No case.

telephone exchange, automatic interconnecting circuit for, *see* Telephones, etc., automatic, etc., (Inter exchange, etc.).

telephone impulse-repetition-bridge, *see* Telephone amplifiers, etc.

Telephone instruments and sets—

Condenser telephones and other electrostatic instruments.

No case.

Magnetic instruments.

48128, 48560, 48678, 48732, 48859,
49640, 50538, 50670.

Microphone and other variable resistance instruments.

48056, 49721.

TELEPHONES, ETC.—contd.

Telephone instruments, etc.—*contd.*

Miscellaneous—

No case.

Mouthpieces, ear peices and other parts for conveying sound.

49721, 50670.

Sets. 46718, 51514, 52220.

Telephone inter connection systems, other than exchange. 52854.

telephone selector switches, *see* Electric selector, etc.

Telephonic amplifiers and other non-contact making electric relays (other than thermionic).

52561, 52720.

terminal equipment for multichannel telephone transmission system, *see* Transmission, etc.

thermionic circuits for generating tone producing electrical impulses, *see* WIRELESS, ETC.

tone generators, *see* Telephone, etc. (Magnetic, etc.).

translating circuits for telephone exchanges, *see* Telephone exchange, etc., automatic, etc., (Inter exchange, etc.).

Transmission systems.

46551, 46700, 46750, 46751, 46943, 47044, 47326, 47476, 48123, 48448, 48764, 48913, 48914, 49596, 49942, 52213, 52458, 52459, 52713, 52855, 53207.

voice frequency signal transmission systems, *see* Transmission, etc.

voice frequency telephone exchange systems, *see* Telephone exchange, etc., automatic, etc., (Inter exchange, etc.).

wiper assembly for selector switches, *see* Electric selector, etc.

Teleprinters, *see* TELEGRAPHS, ETC.

Telescopic forks for cycles and motor cycles, *see* CYCLES, ETC.

Television apparatus, *see* TELEGRAPHS, ETC.

Television apparatus cathode ray tubes for, *see* VACUUM, ETC.

Television camera tubes, *see* VACUUM, ETC.

Television cameras, *see* TELEGRAPHS, ETC.

Television images, devices for transmitting, *see* TELEGRAPHS, ETC.

Television images, devices for recording and reproducing, *see* TELEGRAPHS, ETC.

Television receivers, *see* TELEGRAPHS, ETC.

Temperature controlling circuits, electric oven, *see* HEATING BY ELECTRICITY.

Tennis balls, *see* GAMES, ETC.

Tension pulleys, *see* MECHANISM, MISCELLANEOUS.

Terephthalic acid and derivatives, *see* CARBON COMPOUNDS, ETC.

Terminal circuits for teleprinter machines, *see* TELEGRAPHS, ETC.

Termites composition for extermination of, *see* DISINFECTING, ETC.

Terpenyl ethers, *see* CARBON COMPOUNDS, ETC.

Testanes, *see* CARBON COMPOUNDS, ETC.

Testing apparatus, mechanical, *see* GAUGES, ETC.

Testing conductors and circuits, electric apparatus for, *see* MEASURING AND TESTING, ETC.

Testing electric circuits of wide-band telecommunication systems in general, *see* ELECTRIC SIGNALLING, ETC.

Testing irregularities in sheet metals, electrically, *see* MEASURING AND, ETC.

Testing materials electrically or magnetically, *see* MEASURING, ETC.

Testing physical properties of materials electrically or magnetically, *see* MEASURING, ETC.

Tetracycline, *see* CARBON COMPOUNDS, ETC.

Tetracycline medicinal preparations, *see* DISINFECTING, ETC.

Tetrahydropyridine compounds, *see* CARBON COMPOUNDS, ETC.

Tetrazines, *see* CARBON COMPOUNDS, ETC.

Tetrazolines, *see* CARBON COMPOUNDS, ETC.

Textile cones, *see* SPINNING, ETC.

Textile cords, impregnating with resin, *see* PROOFING, ETC.

Textile fabrics coating with metallic vapours, *see* PROOFING, ETC.

Textile fabrics, joining by sewing, *see* SEWING, ETC.

- Textile fabrics proofing against bacteria, moisture and vermin, *see* **PROOFING, ETC.**
- Textile fibres, blending, *see* **SPINNING, ETC.**
- Textile fibres, prescouring, *see* **DYEING, ETC.**
- Textile fibrous materials, apparatus for displaying neps and other defects in, *see* **SPINNING, ETC.**
- Textile materials, dyeing, *see* **DYEING, ETC.**
- Textile materials proofing against air, moisture, fire bacteria and vermin, *see* **PROOFING, ETC.**
- Textile materials, treating with steam, *see* **DYEING, ETC.**
- Textile printing, *see* **PRINTING.**
- Textile threads apparatus for examining or testing electrically, *see* **MEASURING, ETC.**
- Textile threads testing and inspecting apparatus for, *see* **SPINNING, ETC.**
- Textiles impregnating with plastic materials, *see* **PROOFING, ETC.**
- Textiles, proofing against water and flame, *see* **PROOFING, ETC.**
- Textiles, scouring and bleaching, *see* **DYEING, ETC.**
- Textiles treating with liquids, vapours and gases, *see* **DYEING, ETC.**
- Textiles, washing machine for, *see* **DYEING, ETC.**
- Theophylline and its derivatives, *see* **CARBON COMPOUNDS, ETC.**
- Therapeutic compositions, *see* **DISINFECTING, ETC.**
- Thermal cracking of hydrocarbons, *see* **DISTILLING, ETC.**
- Thermal deposition of metal films, *see* **TINNING, ETC.**
- Thermal regenerators, *see* **HEATING SYSTEMS, ETC.**
- Thermal transformation of hydrocarbon containing gases, *see* **DISTILLING, ETC.**
- Thermally responsive electric circuit breakers, *see* **ELECTRIC SWITCHES, ETC.**
- Thermionic cathodes for electric discharge devices, *see* **VALVES, ETC.**
- Thermionic oscillators, *see* **WIRELESS, ETC.**
- Thermionic valves, *see* **VACUUM, ETC.**
- Thermionic valve circuits, *see* **WIRELESS, ETC.**
- Thermocouples, *see* **BATTERIES, ETC.**
- Thermoplastic compositions, *see* **PLASTIC, ETC.**
- Thermoplastic resins, rendering spongy, *see* **INDIA RUBBER, ETC.**
- Thermoplastic tubes stretching, *see* **MOULDING, ETC.**
- Thermoresponsive adhesives and apparatus for handling, *see* **ADHESIVES, ETC.**
- Thiapyran compounds, *see* **CARBON COMPOUNDS, ETC.**
- Thioisosemicarbazides, *see* **CARBON COMPOUNDS, ETC.**
- Thioketopiperidines, *see* **CARBON COMPOUNDS, ETC.**
- Thiosemicarbazones, *see* **CARBON COMPOUNDS, ETC.**
- Thiourea and derivative thereof, *see* **CARBON COMPOUNDS, ETC.**
- Thrashing grains, *see* **GRAIN, ETC.**
- Thread breaking devices for yarn winding machines, *see* **SPINNING, ETC.**
- Threading or screwing metals, *see* **METAL WORKING.**
- Threading shuttles, *see* **LOOMS, ETC.**
- Threads, filaments and fibres, synthetic polyacrylonitrile, *see* **CELLULOSE, ETC.**
- Threads, treating with liquids, *see* **DYEING, ETC.**
- Thrust bearings, *see* **BEARINGS, ETC.**
- Thrustors, hydraulic, *see* **HYDRAULIC PRESSES, ETC.**
- Thyratron controlled electric rectifiers, *see* **ELECTRIC CURRENTS, ETC.**
- Thyratron controlled electric power supply units, *see* **ELECTRIC SUPPLY, ETC.**
- Tickets issuing machines, *see* **FARES, ETC.**
- Tickets, printing, *see* **PRINTING, ETC.**
- Tiffin carriers, *see* **COOKING, ETC.**
- Tiles, moulding, *see* **MOULDING, ETC.**
- Time measuring electrical circuits and devices, *see* **MEASURING, ETC.**
- Tin openers, *see* **HOLLOW-WARE**

TINNING, GALVANIZING AND COATING WITH METALS INCLUDING THE METALLIC SURFACES PRODUCE MODIFIED. XXXIII(9).

46853, 46913, 47111, 48433, 48865, 49301, 49302, 49315, 49487, 49520, 49727, 49990, 50131, 50201, 50591, 51867, 52046, 52320, 52808, 53192, 53410.

Tire bead spacers, *see* WHEELS, ETC.

Tire building machines, *see* WHEELS, ETC.

Tire treads, *see* WHEELS, ETC.

Tires for farm tractor wheels, *see* WHEELS, ETC.

Tissue extracts for activating serums, *see* DISINFECTING, ETC.

Titanium, extracting and refining, *see* METALS EXTRACTING, ETC.

Titanium obtaining by electrolysis, *see* ELECTROLYSIS, ETC.

Titanium tetrachloride, *see* CHEMICAL COMPOUNDS, ETC.

Tobacco, curing, *see* CIGARS, ETC.

Tobacco, drying, *see* DRYING, ETC.

Tobacco, manufacture of, *see* CIGARS, ETC.

TOILET AND PERFUMERY. LXVI(9).

47359, 48025, 48063, 48086, 48155, 48156, 48299, 48715, 48733, 49041, 49062, 49153, 49648, 49806, 49902, 50207, 50308, 51212, 51213, 51329, 51444, 51628, 51748, 51796, 52034, 52375, 52617.

Tone arm devices for phonographs, *see* PHONOGRAPHS, ETC.

Tone generators for telephone systems, *see* TELEPHONES, ETC.

Tongs, *see* HANDTOOLS.

Tool holders for metal working, *see* METAL WORKING.

Tools for removing tyres from wheels, *see* WHEELS, ETC.

Torches, electric, *see* ELECTRIC LAMPS, ETC.

Torsion joints, resilient, construction of, *see* SPRING, ETC.

Torque measuring apparatus, mechanical, *see* GAUGES, ETC.

Torque transmitting devices hydraulic, *see* HYDRAULIC PRESSES, ETC.

Totalisators, *see* CALCULATING, ETC.

Towels sanitary, *see* MEDICAL, ETC.

Tower bolts, *see* BOLTS, ETC.

Tower bolts, making, *see* METAL WORKING.

Towers for supporting transmission lines, *see* BUILDINGS, ETC.

Towing device for applying sheaths to cables, *see* CONDUCTORS AND, ETC.

Toys, *see* GAMES, ETC.

Track apparatus for interaction with moving trains, *see* RAILWAY SIGNALS, ETC.

Track gauges, railway, *see* GAUGES, ETC.

Track tractor rollers, *see* LOCOMOTIVES, ETC.

Traction, electric, *see* RAILWAY, ETC., PERMANENT WAY, ETC.

Tractor wheels and wheel tyres, *see* WHEELS, ETC.

Tractors, agricultural, *see* AGRICULTURAL, ETC.

Tractors, attachment for carrying passengers, *see* ROAD VEHICLES, ETC.

Tractors, exle for, *see* MOTOR VEHICLES.

Tractors, endless track, *see* LOCOMOTIVES, ETC.

Tractors for cultivating, *see* AGRICULTURAL, ETC.

Traffic control systems, railway, *see* RAILWAY SIGNALS, ETC.

Trailer vehicles, *see* ROAD VEHICLES.

Transducer for recording, erasing and reproducing television signals, *see* TELEGRAPHS, ETC.

Transducers for recording, and reproducing sound, *see* PHONOGRAPHS, ETC.

Transfer and negative materials, photographic, *see* PHOTOGRAPHY.

Transformers electric, *see* ELECTRIC CURRENTS, ETC.

Transistor amplifiers, *see* WIRELESS, ETC.

Transistors, *see* WIRELESS, ETC.

Transmission gearing for motor vehicles, construction of, *see* MECHANISM MISCELLANEOUS.

Transmission systems, radio, *see* WIRELESS, ETC.

Transmission systems for motor vehicles, arrangement and disposition of, *see* MOTOR VEHICLES.

Transmission systems, telephone, *see* TELEPHONES, ETC.

Transmitters, radio, *see* WIRELESS, ETC.

- Transmitting systems, wireless, *see* WIRELESS, ETC.
- Transplanting devices for, *see* AGRICULTURAL, ETC.
- Transporting or conveying materials in bulk, *see* LIFTING, ETC.
- Travelling wave amplifier circuits, *see* WIRELESS, ETC.
- Traveling wave amplifiers, *see* VACUUM, ETC.
- Travelling wave tubes, electric, *see* VACUUM, ETC.
- Traversing heaped materials along ground, *see* EXCAVATING.
- Treads, pneumatic and other elastic tyres, *see* WHEELS, ETC.
- Treating fibres with liquids, *see* DYEING, ETC.
- Treating grains with water and other liquids, *see* GRAINS, ETC.
- Treating or modifying metallic surfaces, *see* TINNING, ETC.
- Treating metallic surfaces to produce modified surfaces, *see* TINNING, ETC.
- Treating synthetic fibres, *see* DYEING, ETC.
- Treating textile materials, *see* DYEING, ETC.
- Treating textiles with resins, *see* PROOFING, ETC.
- Triarylmethane derivatives, *see* CARBON COMPOUNDS, ETC.
- Triazines, *see* CARBON COMPOUNDS, ETC.
- Tricyclic ketones, *see* CARBON COMPOUNDS, ETC.
- Trigger circuits, electric, *see* WIRELESS, ETC.
- Trisnorlanostane series, acids and acid derivatives of, *see* CARBON COMPOUNDS, ETC.
- Triterpene derivatives, *see* CARBON COMPOUNDS, ETC.
- Tropic acid and derivatives thereof, *see* CARBON COMPOUNDS, ETC.
- Trousers, *see* DRESS, ETC.
- Trucks, railway, *see* RAILWAY, ETC., BODY DETAILS ETC.
- Tube bending apparatus, *see* METAL WORKING, ETC.
- Tube well strainers, *see* FILTERING, ETC.
- Tube wells, *see* MINING, ETC.
- Tubeless tyres, *see* WHEELS, ETC.
- Tubes and pipes, *see* PIPES, ETC.
- Tubes and pipes, metal, making, *see* METAL WORKING.
- Tubes couplings for, *see* PIPE JOINTS, ETC.
- Tubes, end connections and joints for, *see* PIPE-JOINTS, ETC.
- Tubes for tyres, *see* WHEELS, ETC.
- Tubes, metal, making, *see* METAL WORKING.
- Tubes reinforced plastic, *see* PIPES, ETC.
- Tubes, thermoplastic, making, *see* MOULDING, ETC.
- Tubulous boilers, *see* STEAM GENERATORS.
- Tuning arrangement of radio receiving sets, *see* WIRELESS, ETC.
- Tunnel furnaces, *see* FURNACES, ETC.
- Turbine pumps, *see* TURBINES, ETC.
- TURBINES, REACTION WHEELS AND WIND MOTORS. XLIV(4).**
- (This heading includes also combination of these with one another or with other motors.)*
- auxiliary propulsion units mounting on aircraft, *see* AERONAUTICS.
- Combination plant.
46500, 46809, 46926, 48215, 50116, 51826.
- combustion control apparatus for gas turbines, *see* BURNERS, ETC.
- combustion devices for gas turbines, *see* BURNERS, ETC.
- combustion system or equipment for gas turbines, *see* BURNERS, ETC.
- combustion turbines, *see* Turbines, elastic, etc.
- compressors, bladed turbine type, *see* Turbine elastic, etc.
- exhaust gas operated turbines, *see* Turbines, elastic, etc.
- fuel feeding device for combustion apparatus of gas turbines, *see* BURNERS, ETC.
- gas generator and turbine power units, *see* Combination, etc.
- gas turbines, *see* Turbines, elastic, etc.

TURBINES, REACTION, ETC.—contd.

turbine driven power installations, *see*
turbine driven power installations, *see*
MECHANISM, MISCELLANEOUS.

heat exchangers for internal combustion
turbines arrangement and disposition
of, *see* Turbines, elastic, etc.

heat exchangers for turbines, *see* HEAT-
ING SYSTEMS, ETC.

heat treatment of alloys for making tur-
bine blades, *see* ANNEALING, ETC.

hydraulic turbine installations, *see* HY-
DRAULIC ENGINEERING, ETC.

igniting systems, electric spark and like,
for internal combustion turbines, *see*
INTERNAL, ETC.

impulse wheel runners, *see* Turbines, etc.

jet engines arranging on aircraft wings,
see AERONATICS.

pelton wheels, *see* Turbines hydraulic.

power gas cartridges for starters, *see*
AMMUNITION, ETC.

power plant with gas turbine exhaust
gas heated steam generator, *see* Com-
bination, etc.

runners fabricating, hydraulic turbine.
see METAL WORKING.

speed control devices for turbines, *see*
GOVERNORS, ETC.

turbine plants, internal combustion type,
see Turbines, elastic, etc.

Turbines, elastic fluid.

46726,	46807,	46808,	46809,	46912,
46926,	48110,	48570,	48592,	48593,
48594,	48595,	49245,	49669,	49746,
49811,	49913,	50226,	50371,	50372,
50841,	51897,	52236,	52247,	53037,
53053,				

Turbines, hydraulic.

47570,	49251,	59252,	59327,	49530,
50054,	50206,	50499,	50564,	50832,
51592,	51649,	53086,	53097,	53219,

Wind motors. 48005, 48496.

Twisting and winding yarns and threads.
see SPINNING, ETC.

Type casting machines, *see* PRINTING,
ETC.

Type composing machines, *see* PRINTING,
ETC.

Type setting or composing, photographic,
see PHOTOGRAPHY.

TYPEWRITERS. XXXVII(2).

47149, 48221, 48890, 49443, 49657, 49661,
49662, 49926, 50077, 50188, 50459, 50488,
50555, 51137, 51253, 51313, 51426, 51513,
51704, 52004, 52573.

Keys for calculating machines, mould-
ing, *see* MOULDING, ETC.

keys for typewriters, moulding, *see*
MOULDING, ETC.

Typographical composing machines, *see*
PRINTING.

Tyre construction, pneumatic, *see*
WHEELS, ETC.

Tyre covers, pneumatic, moulding, *see*
MOULDING, ETC.

Tyre covers, apparatus for retreading, *see*
WHEELS, ETC.

Tyre covers device for trimming moulding
spew from, *see* WHEELS, ETC.

Tyre moulds, *see* MOULDS, ETC.

Tyres for vehicles, wheels, *see* WHEELS,
ETC.

Tyres, pneumatic, *see* WHEELS, ETC.

Tyres removing from wheels, *see* WHEELS,
ETC.

U

Umbelliferone and its derivatives, *see*
CARBON COMPOUNDS, ETC.

**UMBRELLAS AND WALKING STICKS.
LXVI(10).**

47890, 48670, 50484, 52784.

**UNITING METAL TO AND SEALING
METAL INTO VITREOUS MATE-
RIALS. LXIII(3).**

50654, 51240, 51462, 51546, 51985, 51986.

Upholstery, *see* FURNITURE.

Uracils, amino, *see* CARBON, ETC.

Urea and its derivatives, *see* CARBON
COMPOUNDS, ETC.

Urinals, *see* CLOSETS, ETC.

Vaccines, *see* DISINFECTING, ETC.

Vacuum brakes, *see* BRAKES, ETC.

Vacuum jacketed vessels, *see* COOLING,
ETC.

V

VACUUM OR CONFINED GAS OR VAPOUR OR OTHER APPARATUS FOR ELECTRIC DISCHARGES. LXIII(4).

- auxiliary-electrodes, discharge lamp *see* Solid, etc. (Lamps—Electrodes, etc.).
- caps of discharge lamps, *see* Solid, etc. (Lamps. Unclassified, etc.).
- caps of thermionic valves, *see* Solid, etc. (Thermionic, etc.—Caps, etc.).
- cathodes, material for, *see* Solid, etc. (Electrode, etc.—Cathodes, etc.).
- cathode ray tubes envelopes for *see* Solid, etc.—(Containers, etc.—Other unclassified, etc.).
- cathode ray tubes, manufacturing glass envelopes for, *see* GLASS, ETC.
- cathode ray tubes, *see* Solid, etc. (Cathode ray tubes).
- cathode materials for electric discharge tubes, *see* Solid, etc. (Electrode, etc.—Cathode, etc.).
- cold cathode gas-filled discharge tubes, *see* Solid, etc.—Types unclassified.
- degassing discharge tube envelopes, *see* Solid, etc. (Fillings, etc.—Gettering, etc.).
- discharge devices, velocity modulated type, *see* Solid, etc. (Types unclassified).
- discharge lamps, ignition, devices mounted in envelopes of, *see* Solid, etc. (Lamps—Electrodes, etc.).
- discharge lamps with luminescent coating inside the bulb, *see* Solid, etc. (Lamps.—Shield, etc.).
- discharge tube, electric luminescent materials for, *see* LUMINESCENT, ETC.
- electric discharge tubes, calibrating glass envelopes of, *see* GAUGES, ETC.
- electric discharge tubes envelopes for, *see* Solid, etc. (Containers, etc.—Other unclassified, etc.).
- electrodes for glow discharge tubes, *see* Solid electrodes, etc. (Thermionic, etc.—Electrode, etc.).
- electrode supports for cold cathode tubes, *see* Solid, etc.—Types unclassified.
- electrode supports from lamps, *see* Solid, etc. (Lamps.—Electrodes, etc.).

VACUUM OR CONFINED, ETC.—*contd.*

- electrode supports for thermionic valves, *see* Solid, etc. (Thermionic, etc.—Electrodes, etc.).
- electrodes, cathode ray tube, *see* Cathode ray, etc.
- electrodes, arrangement of in thermionic valves, *see* Thermionic, etc.—Electrodes, etc.
- electrodes for discharge tubes, *see* Solid, etc.—(Lamps—Electrodes, etc.).
- electroluminescent lighting devices other than vacuum gas vapour discharge lamps, *see* Solid, etc. (Types unclassified).
- electron beam tubes, *see* Solid, etc. (Cathode ray tubes).
- electron-optical image converter tubes, *see* Solid, etc.—(Cathode ray tubes).
- electron optical systems, *see* Solid, etc. (Cathode ray tubes).
- envelopes of electric discharge devices, construction of, *see* Solid, etc. (Containers, etc.).
- evacuating electric discharge devices, *see* Solid, etc.—(Filling, etc.—Gettering, etc.).
- fluorescent lamps, reflectors for, *see* LAMP-CHIMNEYS, ETC.
- gas discharge vessels for treatment of work-pieces or carrying out chemical reactions, *see* Solid, etc.—Types unclassified.
- glow discharge apparatus for carrying out technical operations, *see* Solid, etc.—Types unclassified.
- image intensifying tubes, *see* Solid, etc. (Types unclassified).
- inter-electrode connectors for discharge lamps, *see* Solid, etc.—(Lamps.—Electrodes, etc.).
- iron trap magnet assembly for cathode ray tubes, *see* Solid, etc. (Cathode ray, etc.).
- irradiating apparatus X-ray, *see* Solid, etc. (Rontgen, etc.).
- lamps, electrodes for, *see* Solid, etc. (Lamps—Electrodes, etc.).
- lamps, metal fillings for, *see* Solid, etc. (Fillings, etc. Fillings, etc.).
- Liquid electrode apparatus. No case.
- luminescent materials, *see* LUMINESCENT, ETC.

VACUUM, ETC.—contd.

magnetic focussing device for cathode ray tubes, *see* Solid, etc. (Cathode, etc.).

magnetron tubes, travelling wave, *see* Solid, etc. (Types unclassified).

magnetron, cathode for, *see* Solid, etc. (Magnetic, etc.).

metal fillings in envelopes, *see* Solid, etc.—(Fillings, etc. fillings, etc.).

Miscellaneous. No case.

over-voltage arrestors, low pressure gas discharge, *see* Solid, etc.—(Types unclassified).

pulse counter tubes, *see* Solid, etc.—Types unclassified.

sealing envelopes of discharge tubes, *see* Solid, etc.—(Container, etc.—Other, etc.).

Solid electrode, apparatus—

Cathode ray tubes.

47144, 47158, 47189, 47199, 47435, 47513, 47514, 47515, 47911, 47915, 49931, 50006, 50423, 51128, 51129, 52319, 52511, 53014.

Containers and envelopes—

Constructions involving use of particular materials. 49212, 50654.

joining and sealing conductors in envelopes, *see* UNITING METAL, ETC.

Other unclassified details—

Calibrating glass bulb. 46591.

Coating discharge lamps. 47213.

Envelopes, cathode ray tube, of. 51654.

Envelopes, discharge device, construction of. 49656, 51655.

Sealing the envelope. 48597, 50334.

Cooling (including temperature regulation). 47314, 48361.

Electrode materials—

Cathode materials. 46593, 46968, 47293, 47516, 47657, 47682, 47734, 48321, 48324, 48663, 48674, 48781, 48853, 50394, 50432, 50995, 51105, 51160, 52367.

Materials other than cathode.

47293, 51160.

VACUUM, ETC.—contd.

Solid electrode, etc.—*contd.*

Fillings and gettering (including regulating of vacuum)—

Compositions containing gases and vapours other than metallic.

49717, 52451, 53359.

Fillings containing metals and metal compounds. 50334, 51160, 52440.

Gettering and regulating gaseous pressure.

46593, 47361, 50334, 51052, 52440, 53305.

Lamps—

Electrodes, arrangement, construction and mounting.

46721, 47907, 48067, 48471, 49307, 49742, 50041, 50439, 51160, 52018.

luminiscent materials for discharge lamps, *see* LUMINISCENT, ETC.

Shields, sheaths and other accessory, components (condensers, resistances, etc.), mounted within discharge lamps.

46507, 47435, 48472, 49936.

starting and operating lamps, supply systems for, *see* ELECTRIC SUPPLY, ETC.

Unclassified details.

Caps for lamps. 49656, 49672.

Lamp bases applying to bulb and threading lead-in-wires there through. 48320.

Leading in wires. 53359.

Reviving fluorescent lamps. 49073.

Magnetic devices for controlling or influencing discharges (other than in cathode ray tubes) and for adjustment of electrodes. 48322.

Photo electric cells. No case.

Rontgen ray tubes. 47205, 48361.

thermionic valve bases, rubber compositions for making, *see* INDIA RUBBER, ETC.

Thermionic valves—

Accessory components and unclassified details. No case.

Caps and terminals. 49656.

VACUUM, ETC.—concl'd.

Solid electrode, etc.—concl'd.

Thermionic valve—cont'd.

Electrodes, arrangement construction and mounting.

46968, 47605, 47682, 47734, 48674, 49307, 51995, 52319.

Screens. 46967.

Valves with four or more electrodes.

No case.

Types, unclassified—

Cold cathode gas-filled discharge tubes. 49307, 49345, 52309.

Electro luminescent lighting devices. 48516, 48648.

Electric discharge apparatus for treatment of work pieces or carrying out chemical reactions. 51270, 51271.

Image intensifying tubes. 47912.

Magnetron tubes, travelling wave. 49916.

Over voltage arresting and brake down discharge devices. 46813, 52995.

Pulse counter tubes. 49713.

Travelling wave tubes. 47005, 49911, 52514, 52735.

Ultra short wave frequency producing devices. 47278.

X-ray image amplifying tubes. 48323, 52288.

television camera tubes, *see* Solid, etc. (Cathode, ray tubes).travelling wave tubes, *see* Solid, etc. (Types unclassified).X-ray image amplifying tubes, *see* Solid, etc. (Types unclassified.)X-ray tubes, cooling electrodes of, *see* Solid, etc. (Cooling, etc.).Valve gears for internal combustion engines, *see* INTERNAL COMBUSTION, ETC.**VALVES AND COCKS (OTHER THAN ENGINE AND LIKE VALVE ACTUATING ARRANGEMENTS) AND LIKE APPARATUS FOR REGULATING FLOW OF FLUIDS. XXIX(3).**

Ball and float valves.

48556, 48807, 50180, 53204.

VALVES AND COCKS, ETC.—cont'd.butterfly valves manually operated, *see* Manually, etc.constant flow governors, *see* Waste-preventing, etc.discharge regulators, other than siphons and sluice gates, for hydraulic plants, *see* Regulating, etc.electrically operated valves, *see* Miscellaneous.

Fluid actuated valves (other than ball and float, tyre and waste-preventing).

46783, 47582, 47790, 47791, 47864, 47865, 47866, 47867, 47896, 48129, 48576, 48603, 49267, 50068, 50278, 50279, 50960, 51059, 51727, 52043, 52055, 52479, 53058, 53297.

fluid flow distributing and regulating devices other than valves and cocks, *see* Regulating, etc.

Manually and mechanically actuated valves.

46475, 46515, 46520, 46868, 47874, 48175, 49119, 49765, 49819, 50075, 50378, 50763, 50776, 50793, 50871, 51023, 51059, 51670, 51849, 51924, 52791, 53058, 53098.

mechanically operable valves, *see* Manually, etc.

Miscellaneous—

Automatic flow check with valves fusible members. 46744.

Electrically operated valves. 52773.

Magnetically actuated valves. 53204.

Valve mounting on pressure vessels. 46868.

pilot or servo pressure actuated control valves, *see* Fluid, etc.pressure actuated by pass valves, *see* Fluid, etc.

Regulating volume of flow for pressure of fluids other than by valves.

47038, 47445, 48807, 49171, 49371, 50595, 51469, 51749, 52632, 52739.

relief and other control valves for hydraulic systems, fluid pressure actuated, *see* Fluid, etc.safety devices for control valves of gas cylinders, pressure actuated, *see* Fluid actuated, etc.safety valves, steam, *see* Fluid, etc.spring loaded fluid controlled valves, *see* Fluid, etc.

VALVES, ETC.—concl'd.

Tyre and like inflating and deflating valves. 46555, 48579, 50102, 51431, 52633.

valves for internal combustion engine, see INTERNAL COMBUSTION, ETC.

Valves actuated in part by fluid and in part by mechanical means.

47038, 48576, 48606, 48904, 49765, 49781, 50075, 50776, 51307, 52889.

water taps, see Manually, etc.

Valves, reciprocating pump, arrangement of, see PUMPS, ETC.

Valves, steam engines, see STEAM ENGINES, ETC.

Valves for tyre, see VALVES, ETC.

Vapour and liquid seperators centrifugal, see CENTRIFUGAL MACHINES, ETC.

Vapour burners, see BURNERS, ETC.

Vapour generators, see STEAM GENERATORS, ETC.

Vapour turbines, see TURBINES, ETC.

Varnishes, see PAINTS, ETC.

Vat dyeing, see DYEING, ETC.

Vat dyes, see CARBON COMPOUNDS, ETC.

Vegetable tan liquors, see LEATHER, ETC.

Vehicle lifts, see LIFTING, ETC.

Vehicles, device for counting the passage of, see CALCULATING, ETC.

Velocipedes, see CYCLES, ETC.

Venetian blinds, see FURNITURE, ETC.

Venetian shutters, see DOORS AND WINDOWS, ETC.

VENTILATION. XXVI(4).

air conditioning, see Methods, etc. (Air treating, etc.).

Fans, punkah and like. No case.

Methods of and arrangement and adaptation of means for ventilation—

Air treating and conditioning (moistening, sterilising and drying, etc.) details in ventilating plant. 48004, 48272, 50511, 51109, 51752, 51893, 51894, 53177.

VENTILATION.—cont'd.

Methods of and, etc.—cont'd.

Plant combinations for circulating air in buildings, ships and vehicles.

49796, 50956, 51109, 51296, 52949.

Ventilators, ventilating shafts and valve and valve apparatus for ventilation.

47426, 49200.

Vermicides, see DISINFECTING, ETC.

Vibration dampers, see SPRINGS, ETC.

Vices, see HAND TOOLS.

Viscosity, measuring by electric apparatus, see MEASURING, ETC.

Viscose rayon, see CELLULOSE, ETC.

Vitamins, see CARBON COMPOUNDS, ETC.

Voice frequency transmission systems, see TELEPHONES, ETC.

Voltage breakdown devices, see ELECTRIC SUPPLY, ETC.

Voltage regulators, see ELECTRIC SUPPLY, ETC.

Voltaic cells, see BATTERIES, ETC.

Vulcanising rubber, see INDIA RUBBER, ETC.

W

Waddings, surgical, see MEDICAL, ETC.

Wall heaters, electric, see HEATING BY ELECTRICITY.

Wall hour electric meters, see MEASURING, ETC.

Wall hour electric meters, bearing assembly of rotor-spindle of, see BEARINGS, ETC.

Walls and partitions, see BUILDINGS, ETC.

Ward-leonard control system of electric motors, see MOTOR CONTROL, ETC.

Wardrobes, see FURNITURE.

Warp beams, see LOOMS.

Warps tensioning in looms, see LOOMS.

Wash blankets for printing fabrics, see PRINTING.

Washers for bolts and nuts, see BOLTS, ETC.

WASHING AND CLEANING BUILDINGS AND DOMESTIC ARTICLES OTHER THAN CLOTHES. XLIII(5).

47664, 48842, 53338, 53364.

Washing clothes, machines for, *see* DYEING, ETC.

Washing coal, *see* WASHING GRANULAR, ETC.

Washing domestic articles, *see* WASHING AND CLEANING, ETC.

Washing fabric, *see* DYEING, ETC.

WASHING GRANULAR, POWDERED AND LIKE MATERIALS. XXXIV(5).

Apparatus containing screening and sieving members, (including jigs but not upward current classifiers).

52733.

by simultaneously subjecting to physical shock, *see* Washing, etc.

Flotation and like selective processes and apparatus.

46484, 46907, 48629, 50353, 50957, 51406, 51987, 52124, 52916, 53446.

ore and coal washing plants, sink-and-float, *see* Flotation, etc.

sink and float and like differential density processes for separating solid particles, *see* Flotation, etc.

Upward current classifiers.

50616, 50638, 51245, 52332, 52570.

Washing, settling and decanting apparatus (other than flotation and screening apparatus and upward current classifiers).

47467, 47644, 49495, 51299, 51441, 51485, 51611, 52124.

Washing, laundry and domestic, *see* DYEING, ETC.

Washing machines, clothes and textile, *see* DYEING, ETC.

Washing plants for ores, *see* WASHING GRANULAR, ETC.

Washing plates and dishes, *see* WASHING AND CLEANING, ETC.

Waste preventing valves, *see* VALVES, ETC.

Watch bracelets, chains or protectors, *see* JEWELLERY.

Watch chains, *see* CHAINS, ETC.

WATER AND OTHER LIQUID LEVELS REGULATING, INDICATING AND REGISTERING. XLI(9).

(The indication and regulation of level of liquid used in measuring instruments and apparatus, other than those measuring only liquid levels are not indexed here, but under GAUGES; PHILOSOPHICAL INSTRUMENTS; and other headings for such instruments and apparatus.)

48539, 48806, 49176.

WATER AND OTHER LIQUIDS, AND SEMI-LIQUIDS, RAISING AND FORCING, OTHER THAN BY PUMPS. XLVII(4).

Bucket-elevators, scoop-wheels and like rotary apparatus.

46817, 47419, 49687.

Chain pumps, and other adhesion apparatus. No case.

hydraulic ram or hammer operated devices, *see* Pressure, etc.

lifting or raising liquids utilising solar heat, *see* HEATING SYSTEMS, ETC.

Miscellaneous—

Conveying liquids by undulated flaccid members. 49076.

Raising liquids by means of rotating tubes. 46789.

Pressure and vacuum apparatus. 47413, 48100, 48393, 49376, 49954, 49968.

Pycota and like reciprocating type of bucket apparatus. 46817.

WATER AND UNSPECIFIED LIQUIDS. PURIFYING AND SOFTENING. II(4).

(This heading includes also processes of hardening and imparting like properties to water.)

biologically purifying liquids, *see* Miscellaneous.

Gaseous reagents, treatment with.

46951, 51639, 51707, 51791, 51851, 52887.

Heating, treatment by. 46951.

Liquid and solid reagents, treatment with (including use of zeolites and like reagents).

46554, 46857, 47446, 47468, 47766, 48512, 48571, 48776, 49036, 50567, 51031, 51170, 51371, 51463, 51776, 53093.

WATER, ETC.—contd.

Miscellaneous—

- Biologically purifying liquid. 51639.
- polluted liquids purifying with carbon dioxide, *see* Gaseous, etc.
- treating with cation exchange materials, *see* Liquid, etc.
- Water coolers, *see* COOLING, ETC.
- Water, disinfecting by gases, *see* WATER, ETC., PURIFYING, ETC.
- Water dispersible solid compositions, *see* CHEMICAL PROCESSES, ETC.
- Water-dispersion paints, *see* PAINTS, ETC.
- Water evaporating plants, *see* DISTILLING, ETC.
- Water faucets, *see* VALVES, ETC.
- Water gas, producing, *see* COKING, ETC.
- Water heaters electric, *see* HEATING BY ELECTRICITY.
- Water paints, *see* PAINTS, ETC.
- Water proof fabrics and sheets, *see* PROOFING, ETC.
- Water proofing buildings, *see* BUILDINGS, ETC.
- Water proofing compositions, *see* PROOFING, ETC.
- Water supply regulating valves, *see* VALVES, ETC.
- Water taps, *see* VALVES, ETC.
- Water tube boilers, *see* STEAM GENERATORS.
- Watt-hour electric meters, *see* MEASURING, ETC.
- Wave guides, electric, *see* WIRELESS, TELEGRAPHS, ETC.
- Wave guides, electric, *see* WIRELESS, ETC.
- Waves, electric generating circuits, *see* WIRELESS, ETC.
- Wax articles moulding of, *see* MOULDING, ETC.

WAXES, SHELLAC AND FATTY ACIDS FOR SOAP AND CANDLE MAKING. XI(3).

- copal, *see* Shellac.
- Fatty acids (including only oleic and other acids for soap and candle making).
- 46713, 48681, 48934.

WAXES, ETC.—contd.

- resins and resinous compounds re-covering from coal, *see* Shellac, etc.
 - Shellac and resin and resinous compounds (other than synthetic).
 - 46554, 49403, 53009.
 - synthetic resins, *see* CARBON COMPOUNDS.
 - Waxes. 46554, 46951, 47179, 47442, 48234, 48511, 48660, 48661, 49187, 49188, 49403, 51571, 51889.
 - Weaving fabrics, *see* LOOMS, ETC.
- ## **WEBS AND SHEETS AND OTHER FLEXIBLE MATERIAL, FEEDING AND DELIVERING. XXXVII(3).**
- 46598, 47284, 47329, 47773, 47797, 47832, 48223, 48510, 49065, 49389, 49805, 49964, 50152, 50350, 50573, 50592, 50593, 50788, 50859, 51095, 51355, 51788, 51813, 51921, 51949.
 - Wedges and cotters, *see* NAILS, ETC.
 - Wedges for railway permanentway, *see* RLY., ETC. PERMANENT, ETC.
 - Weed destroying appliances, *see* AGRICULTURAL, ETC.
 - Weed destroying compositions, *see* DISINFECTING, ETC.
 - Weed killing compositions, *see* DISINFECTING, ETC.
 - Weed hoes, *see* AGRICULTURAL, ETC.
 - Weft doubling and twisting mechanisms, LOOMS.
 - Weft doubling and twisting mechanisms, *see* LOOMS.
 - Weft inserting devices for looms, *see* LOOMS.
 - Weft selecting mechanism in looms, *see* LOOMS.
- ## **WEIGHING APPARATUS. XLI(10).**
- 46763, 47634, 47840, 48113, 48348, 48989, 49609, 50053, 50520, 50787, 51191, 51365, 51874, 51915, 52300, 52937.
 - printing devices for weighing machines, *see* PRINTING.
 - Weighing machines printing devices for, *see* PRINTING.
 - Weight lifting exercising apparatus, *see* GAMES, ETC.
 - Weighting means for spinning machine, rollers, *see* SPINNING, ETC.
 - Weighting means for looms, *see* LOOMS.

Weirs, *see* HYDRAULIC ENGINEERING, ETC.

Welding, *see* METAL WORKING.

Welding rods, *see* METAL WORKING.

Welding electrodes, *see* METAL WORKING.

Welding electrodes, *see* METAL WORKING.

Well casings, perforating, *see* METAL WORKING.

Wells, *see* MINING, ETC.

Wells, boring, drilling or sinking, *see* MINING, ETC.

Wet processes for extracting metals, *see* METALS EXTRACTING, ETC.

Wetting agents for fibres, *see* DYEING, ETC.

Wharves, *see* HYDRAULIC ENGINEERING, ETC.

Wheat grains, treating, *see* GRAIN, ETC.

Wheel suspension in motor vehicles, *see* MOTOR VEHICLES.

WHEELS AND TYRES FOR VEHICLES. LVI.

Air tubes and chambers for pneumatic and like tyres.

47497, 51161, 51265, 51266, 51432, 52252, 52253, 52484, 52659.

auxiliary air retaining elements in air chambers, *see* Air tubes, etc.

beads pneumatic tire construction of, *see* Building, etc.

Building and repairing wheels and tyres.

46538, 46936, 46970, 47126, 47490, 47927, 48407, 48442, 48482, 50679, 51211, 51918, 51919, 52059, 52195, 52252, 52253, 52484, 52604, 53430.

clamps for securing rim to wheel body, *see* Rims, etc.

Disc and spoke wheels (other than spring wheels), general design of.

48706, 51430, 51918, 53041.

endless tracks for vehicles, *see* LOCOMOTIVES, ETC.

Hubs for wheels. 47629, 49983, 52859.

WHEELS AND TYRES, ETC.—*contd.*

Jackets and covers for pneumatic and other elastic tyres.

47465, 48378, 49192, 49548, 50277, 50359, 52155, 52604, 52824, 53363.

landing wheels, aeroplane, *see* Miscellaneous.

Metallic and non-metallic cores for tyres. No case.

Miscellaneous—

Mounting wheels in vehicles. 49465.

Slip preventing means for wheels. 50325, 51644.

Steerable landing wheels for aeroplanes. 50940.

mounting wheels in vehicles, *see* Miscellaneous.

non skid tire treads, *see* Tread bands, etc.

Pneumatic and other elastic tyres construction of (other than air tubes and chambers, jackets and covers, metallic and non-metallic cores, treadbands projections and surfaces).

46890, 47465, 47571, 47720, 47943, 48378, 48407, 48740, 48950, 49817, 50171, 50196, 50519, 50846, 50915, 51265, 51266, 51409, 51919, 52149, 52155, 52484, 53119, 53312.

pneumatic tires, moulding, *see* MOULDING, ETC.

pneumatic tires, puncture sealing compositions for, *see* Building, etc.

pneumatic tubes, puncture sealing compositions for, *see* Air tubes, etc.

reconditioning worn lugs of tyres, apparatus for, *see* Building, etc.

relugging tyres, *see* Building, etc.

relugging tyres apparatus for, *see* Building, etc.

retreading apparatus, wheel, *see* Building, etc.

Rims and felloes for wheel tyres.

46890, 49725, 50102, 50158, 50519, 50932, 51050, 51430, 51918, 52634, 53041.

Spring wheels. No case.

sealing punctures in pneumatic tyres and tubes, *see* Building, etc.

WHEELS AND TYRES, ETC.—contd.

sealing punctures in pneumatic tyres and tubes, rubber compositions for, see INDIA RUBBER, ETC.

tools for removing tyres from wheels, see Building, etc.

Tread bands, projections and surfaces of pneumatic and like tyres.
46538, 48442, 49548, 50359, 50461, 50737, 51080, 51777, 53312.

tubeless tyres, building up, see Building, etc.

tyre covers, moulds for retreading, see MOULDING, ETC.

tyre covers, retreading, see Building, etc.

Tyres, non-elastic. 48740, 50080.

tyres removing from, wheels, tools for, see Building, etc.

valves for, pneumatic chambers, see VALVES, ETC.

vulcanising bag extracting machines, see BUILDING, ETC.

Wheels, metallic, casting, see CASTING, ETC.

Whisking machines, see MIXING, ETC.

Wick adjusting mechanisms for burners, see BURNERS, ETC.

Wind mills, see TURBINES, ETC.

Wind shields for automobiles, see ROAD VEHICLES, ETC.

Winders, mine, see LIFTING, ETC.

Winding package of threads yarns, & wires, see SPINNING, ETC.

Winding up and paying out apparatus, see LIFTING, ETC.

Winding wires and the like on bobbins, reels and spools, see SPINNING, ETC.

Winding yarns and threads, see SPINNING, ETC.

Window opening and closing devices, see DOOR AND GATE, ETC.

Wine, bear and like decolourising and purifying, see BEVERAGES, ETC.

Winnowing, see SIFTING, ETC.

Wiper assemblies for telephone selector switches, see TELEPHONES, ETC.

Wire and rod couplings, see ELECTRIC COUPLINGS, ETC.

Wire compensators railway, signalling systems, see RAILWAY SIGNALS, ETC.

Wire loops or spirals forming, see METAL WORKING.

Wire netting or fencing, see FENCING, ETC.

Wire stitching machines, see NAILS, ETC.

Wire winding machines, see SPINNING, ETC.

WIRELESS SIGNALLING AND CONTROLLING. LXII.

Aerials and like radiating and receiving conductors.

47375, 47805, 49924, 50152, 50624, 51416, 52675, 53121.

amplifiers using semi conductive devices such as transistors, see Miscellaneous.

amplifying high frequency oscillations by means of special types of discharge tubes, see Thermionic, etc. (Utilising, etc.).

amplitude modulation of carrier waves, see Thermionic-valve, etc. (Amplifying, etc.).

antennae directive, see Directive, etc.

asymmetrically conductive elements, see Miscellaneous.

audio-frequency amplifiers, thermionic valve, see Thermionic, etc.—Amplifying, etc.

cabinets for radio sets, see Wireless receiving, etc.

carrier supply arrangements for multi-channel systems, see Diplex, etc.

carrier transmission systems, wired, see Wired, etc.

carrier wave communication systems, cable, see Wiredwireless, etc.

carrier waves modulating or varying in frequency or phase means for, see Secret, etc.

carrier waves transmission systems, wired, see Wired wireless, etc.

circuits cathode gas discharge tube, see Thermionic, etc. (Utilising, etc.).

circuits, crystal triode, see Miscellaneous.

circuits embodying multi-gap cold cathodigas filled tubes, see Thermionic, etc. (Utilising, etc.).

circuits, semiconductive device, see Miscellaneous.

WIRELESS SIGNALLING, ETC.—contd.

- cold cathode discharge tube relays, *see* Thermionic, etc.—Relay circuits.
- compandor arrangement for multi-channel, system, *see* Diplex, etc.
- compandor arrangement for pulse code modulation system, *see* Secret, etc.
- coupling aerials to oscillation generators other than thermionic, *see* Electrical oscillations, etc.
- coupling aerials to delectors, *see* Receiving, etc.
- couplings aerials to thermionic valve oscillators, *see* Thermionic, etc. (Generating, etc.).
- couplings for wave propagation over wired-lines, *see* Wired-wireless, etc.
- crystal and like detectors, *see* Miscellaneous.
- crystal contact devices, *see* Miscellaneous.
- crystal triode circuits, *see* Miscellaneous.
- crystal triodes, *see* Miscellaneous.
- current and voltage supply arrangements, external to valve circuits, *see* ELECTRIC CURRENTS, ETC.
- Diplex, duplex and multiplex systems, utilising.
46750, 46751, 48123, 48802, 49032, 49466, 49467, 50671, 51035, 51277, 52133, 52213, 52308, 52543, 52685, 52737, 53110, 53224, 53431.
- Directive, propagating and receiving systems (including bearings or location determining).
17564, 47805, 47887, 47954, 48604, 49321, 49924, 50222, 51416, 52672, 52737, 53110, 53224, 53431.
- distributor circuits for multichannel pulse transmitters, *see* Diplex, etc.
- diversity reception systems, *see* Receiving, etc.
- Electric oscillations, high frequency, producing by means other than thermionic valves and other discharge tubes.
46769, 47643, 52097, 52257, 53087.
- electric signal translating semiconductor elements, *see* Miscellaneous.
- electric switching circuits cold cathode gas discharge tube, *see* Thermionic, etc.—(Relay circuits).

WIRELESS, ETC.—contd.

- electric wave generators thermionic valve, *see* Thermionic, etc.—(Generating, etc.).
- electromagnetic horns, oscillation radiating, *see* Aerials, etc.
- electronic ringing current and tone generators, *see* Thermionic, etc.—(Generating, etc.).
- enciphering devices apparatus, for transforming messages illegible, *see* Secret, etc.
- filter, rejector and separator circuit for blocking or separating electric currents of particular frequencies or ranges, *see* TELEGRAPHS, ELECTRIC.
- frequency or phase modulated communication system, *see* Secret, etc.
- frequency-shift receivers, *see* Secret, etc.
- frequency-shift signalling circuits, *see* Secret, etc.
- generating electric pulses, thermionic valve circuits for, *see* Thermionic, etc. (Generating, etc.).
- generation of electric oscillation in waveguides, *see* Electric oscillations, etc.
- high frequency signalling, frequency modulation, *see* Secret, etc.
- high frequency transmission systems wired, *see* Wired-wireless, etc.
- high frequency transmitting amplifiers, *see* Thermionic, etc.—(Generating, etc.).
- high frequency valve amplifiers, for signal reception, *see* Thermionic, etc. (Receiving high, etc.).
- horn arrays, *see* Directive, etc.
- impedance watching of aerials device for, *see* Aerials, etc.
- impedance watching of transmission lines, *see* Transmitting, etc.
- impulse generating circuits, thermionic valve, *see* Thermionic, etc.—(Generating, etc.).
- low frequency amplifiers, thermionic valve, *see* Thermionic, etc.—(Amplifying, etc.).
- low frequency or video frequency television signals, thermionic valve amplifiers for, *see* Thermionic valve, etc. (Amplifying, etc.).

WIRELESS, ETC.—contd.

micro-wave filters, *see* TELEGRAPHS, ETC.

micro-wave transmission system attenuators for, *see* TELEGRAPHS, ETC.

micro-wave transmission systems wired, *see* Wired-wireless, etc.

Miscellaneous—

Amplifying devices employing semi-conductor material. 48722.

Circuits using semi-conductive devices. 49057, 50024, 50369, 50524, 50880, 52347.

Crystal diodes contacts transistors and other semi conducting elements.

47209, 47228, 47894, 47985, 48677, 49445, 49879, 50121, 50354, 50447, 50964, 51240, 51413, 51546, 51631, 52257, 52842, 52863, 52998.

Crystal triode circuits. 49606, 50106, 51398.

Forming P-N junctions. 50435.

Pulse delay circuits. 47295.

Trigger circuits comprising crystals and like semi conductor devices. 52906.

Trigger circuits. 49843, 50105, 50107, 50545.

Wave guides electromagnetic. 47308, 50569.

multichannel carrier wave communication systems, *see* Diplex, etc.

multichannel pulse communication systems, *see* Diplex, etc.

multiplex systems, *see* Diplex, etc.

noise suppressing means for radio receivers, *see* Receiving systems, etc.

oscillation, generators, thermionic valve, *see* Thermionic, etc.—(Generating, etc.).

P-N junctions, semi conducting material, *see* Miscellaneous.

phase detecting and modulating apparatus, *see* Secret, etc.

phase frequency modulated radio communication systems, *see* Secret, etc.

photoelectric cell circuits for generating electric pulses, *see* Electric oscillators, etc.

WIRELESS, ETC.—contd.

pulse code modulation systems, multi-channel, *see* Diplex, etc.

pulse codes modulating means for, *see* Secret, etc.

pulse code signal communication system, *see* Secret, etc.

pulse generators transistor, *see* Electric oscillation, etc.

pulse generators, thermionic valve, *see* Thermionic, etc.—(Generating, etc.).

radar systems, *see* Directive, etc.

radio direction finders, *see* Directive, etc.

radio frequency filters, *see* TELEGRAPHS, ETC.

receiving modulated pulse codes, slicing means for, *see* Secret, etc.

Receiving systems and apparatus (other than for directive, diplex, duplex, secret and selective systems).

46818, 47003, 50659, 51421, 51539, 52411, 53121.

recording and storing intelligence waves, *see* Secret, etc.

regenerative repeaters, thermionic valve for low frequency currents, *see* Thermionic, etc.—(Amplifying, etc.).

Secret and selective systems requiring specially co-ordinated transmitter and receivers, and other systems not using simply amplitude modulation or interruption, utilising.

46750, 46751, 46787, 47003, 47436, 47607, 47887, 47954, 47962, 48480, 48506, 48598, 48801, 48802, 48992, 48994, 49215, 49466, 49467, 49614, 49674, 50124, 50369, 50425, 50478, 50671, 51022, 51035, 51053, 51395, 51470, 51514, 51562, 51956, 51990, 52133, 52213, 52315, 52369, 52410, 52412, 52672, 52673, 52674, 52685, 52737, 52907, 53407.

semi-conducting devices, *see* Miscellaneous.

semi-conductor device, circuits for amplifying oscillatory and pulsatory currents, *see* Miscellaneous.

signalling systems using wired lines, *see* Wired-wireless, etc.

WIRELESS, ETC.—contd.

- systems not using simple amplitude modulation or interruption of carrier waves, *see* Secret, etc.
- systems utilizing carrier waves modulated or varied in frequency or phase (including systems involving periodic change of wave frequency), *see* Secret, etc.
- telecontrol devices for radio receivers communications, *see* Secret, etc.
- thermionic valve oscillators, *see* Thermionic, etc.—(Generating, etc.).
- Thermionic valve circuits for amplifying, generating, modulating, receiving, and relaying—
- Amplifying audio frequency currents and television and copying telegraph signals. 46459, 46631, 46737, 46780, 46959, 47963, 48678, 49068, 49241, 50147, 50560.
- Generating oscillatory and alternating currents (including high frequency transmitting amplifiers).
- 46768, 46769, 47009, 47437, 47859, 47910, 48078, 48912, 49039, 49625, 49664, 49916, 50106, 50689, 50972, 51054, 51471, 51990, 52099, 52315, 53013, 53121.
- Modified for current and voltage supply thereto. No case.
- Modulation and interruption of high frequency currents for. 53080.
- Receiving high frequency signals.
- 46631, 47009, 50147, 50560.
- Relay circuits. 46770, 48325, 48964, 49345, 49414, 52099, 52180, 52309, 52561.
- Utilising discharge tubes of special in general. 48325, 49911, 49931, 52514, 53003, 53014.
- time division multiplexing, apparatus, *see* Diplex, etc.
- transistors, *see* Miscellaneous.
- translating devices, amplitude modulated signal and pulse code signal, *see* Secret, etc.

WIRELESS, ETC.—concl'd.

- transmission systems, wired line, *see* Wired-wireless, etc.
- Transmitting systems including keying. 47003, 50624, 52250, 52410, 52412, 52671.
- travelling wave tubes circuits, *see* Thermionic, etc.—(Utilizing, etc.).
- trigger circuits, *see* Miscellaneous.
- tuning arrangement of radio receiving sets, *see* Wireless receiving, etc.
- valve circuits for controlling actuation of apparatus on dependance of difference of frequency of signals, *see* Thermionic, etc. (Relay, etc.).
- volume control means in audio frequency television, and like thermionic, amplifiers, *see* Wireless receiving sets, etc.
- wave form, indicating analysing and measuring distortion of, *see* MEASURING, ETC.
- wave guides, couplings for, *see* Miscellaneous.
- Wired-wireless systems.
- 46943, 47044, 47484, 47485, 47486, 47962, 48448, 48492, 48993, 49032, 49260, 49596, 52250, 52713, 52720, 52855.
- Wireless receiving sets, construction and control of. 46838, 48326, 49067, 49083, 51096, 52542.
- Wires, winding on bobbing, spools, *see* SPINNING, ETC.
- Wires, reinforcing winding on bodies, *see* METAL WORKING.
- Wiring, electric, *see* ELECTRIC SUPPLY, ETC.
- Wood chipping machine, *see* WOOD CUTTING, ETC.
- WOOD CUTTING AND WORKING.**
XLIII(6).
- 47276, 47412, 47811, 47993, 49054, 50119, 50748, 51142, 51803, 51993, 52489, 52895, 53111.
- shaped articles moulding from comminuted wood, *see* MOULDING, ETC.
- Wood impregnating with liquids, *see* PROOFING, ETC.
- Wood preservatives, *see* PROOFING, ETC.

Wooden boards, artificial, see INDIA RUBBER, ETC.

Wood, leather, and textiles, proofing against termites and other pests, see Proofing, etc.

Wood, treating with liquids and gases, see PROOFING, ETC.

Wool fabrics, setting, by treating with liquids, see DYEING, ETC.

Wool treating with liquids, see DYEING, ETC.

Woollen fabrics, setting by treatment with liquids, see DYEING, ETC.

Work holders for metal working purposes, see METAL WORKING.

Worm gearing, see MECHANISM MISCELLANEOUS.

Worm gear pumps, see ROTARY ENGINES, ETC.

Woven fabrics, treating with liquids, see DYEING, ETC.

Wrenches, see HAND TOOLS.

WRITING APPLIANCES, INK AND RECEPTACLES FOR WRITING MATERIALS. XLII(6).

46548, 47737, 47816, 48093, 48094, 48121, 48258, 48546, 48658, 49013, 49047, 49574, 50023, 50081, 50605, 50784, 51402, 51468, 51597, 51608, 51828, 51830, 52339, 52432, 52538, 52581, 52594, 53116, 53154, 53353.

X

Xanthine and derivatives thereof, see CARBON COMPOUND, ETC.

X-ray diagnostic agents, see DISINFECTING, ETC.

X-ray diagnostic apparatus, see MEDICAL, ETC.

X-ray image amplifying tubes, see VACUUM, ETC.

X-ray photographic apparatus, see PHOTOGRAPHY.

X-ray tubes, see VACUUM, ETC.

Xylidides, see CARBON COMPOUNDS, ETC.

Y

Yarn, conditioning of by spraying, with chemicals, see DYEING, ETC.

Yarn packages forming, see SPINNING, ETC.

Yarns and threads, see SPINNING, ETC.

Yarns, and threads, processing by liquid treatment, see DYEING, ETC.

Yarns, sizing, see PROOFING, ETC.

Yarns, spinning, see SPINNING, ETC.

Yarns, winding, see SPINNING, ETC.

Z

Zinc obtaining by electrolysis, see ELECTROLYSIS, ETC.

Zip fasteners, see FASTENINGS, ETC.

Zirconium halides, see CHEMICAL COMPOUNDS, ETC.

PART III.

Special Proceedings (Patents), 1954-55.

This part contains the list of special proceedings in continuation of corresponding lists of the consolidated volume of Inventions 1912-1920, and the Annual Journals for 1921-1955.

A.—Void applications. The applications bearing the following numbers have not been accepted and are deemed to have been refused under Section 5(4) of the Indian Patents and Designs Act, 1911. The specifications in respect of there applications have not been printed and are not open to public inspection except those marked with the sign † which have been published under Section 78-A(3) :—

46458,	46477,	46487,	46488,	46498,	46515†,	46516,	46517,	46522,
46540,	46556,	46567,	46577,	46590,	46592,	46612,	46613,	46620,
46625,	46630,	46636,	46650†,	46657,	46668,	46669,	46670,	46678,
46679,	46694,	46695,	46710,	46711,	46712,	46715,	46722,	46729,
46730,	46732,	46739,	46748,	46760,	46761,	46765,	46766,	46792,
46795,	46796,	46801,	46824,	46831,	46841,	46846,	46855,	46858,
46859,	46862,	46863,	46871,	46881,	46888,	46896,	46900,	46918,
46963,	46965,	46980,	46986,	46987,	46988,	46989,	46990,	46991,
46992,	46993,	46996,	47019,	47027,	47039,	47066,	47068,	47069,
47071,	47072,	47076,	47077,	47078,	47107,	47116,	47132,	47136,

47139,	47155,	47161,	47162,	47168,	47169,	47170,	47208,	47219,
47220,	47221,	47222,	47230,	47247,	47265,	47285,	47287,	47299,
47304,	47312,	47328,	47330,	47331,	47353,	47369,	47377,	47383,
47384,	47391,	47392,	47393,	47410,	47429,	47450,	47462,	47473,
47474,	47483†,	47487,	47493,	47503,	47520,	47531†,	47533,	47535,
47559,	47567,	47573,	47574,	47583,	47584,	47586,	47587,	47594,
47595,	47611,	47612,	47613,	47615,	47616,	47617,	47631,	47642,
47644†,	47648,	47656,	47666,	47667,	47668,	47670,	47672,	47673,
47685,	47686†,	47701,	47716,	47717,	47722,	47729,	47742,	47751,
47758,	47761,	47762,	47765,	47770†,	47775,	47792,	47800,	47801,

47804,	47823,	47834,	47836,	47837,	47838,	47839,	47847,	47848,
47878,	47879,	47891,	47913,	47914,	47917†,	47919,	47920,	47921,
47922,	47929,	47942,	47946,	47959†,	47969,	47971,	47984†,	47988,
47993,	48008,	48010,	48023,	48037,	48040,	48043,	48046,	48055,
48060,	48065†,	48066,	48068,	48085,	48092,	48101,	48104,	48105,
48107,	48111†,	48132,	48136,	48138,	48139,	48140,	48152,	48153,
48163,	48171,	48178,	48180,	48186,	48187,	48188,	48200,	48205,
48222,	48228,	48131†,	48236,	48241,	48257,	48274,	48277,	48280,
48285,	48286,	48294,	48328,	48329,	48331,	48332,	48343,	48349,
48357,	48362,	48365,	48370,	48374,	48375,	48376,	48377,	48386,

48390,	48395†,	48403†,	48404,	48418,	48420,	48426,	48430,	48438,
48440,	48443,	48447,	48457,	48459,	48461,	48475,	48481,	48500,
48521,	48522,	48558,	48574,	48578,	48602,	49615,	48639,	48643†,
48655,	48669,	48687,	48693,	48694,	48698,	49720,	48721,	48734,
48735,	48737,	48750,	48751†,	48752,	48754,	48767,	48769,	48772,
48777,	48780,	48785,	48816,	48817,	48833,	48838,	48841,	48850,
48854,	48856,	48868,	48874,	48875,	48889,	48919,	48924,	48927,
48930†,	48933,	48959,	48973,	48979,	49023,	49034,	49035,	49050,
49055,	49058,	49093,	49100,	49101,	49120,	49127,	49134,	49144,
49145,	49146,	49151,	49152,	49154,	49157,	49158,	49173,	49189,

49193,	49201,	49206,	49207,	49208,	49216,	49223,	49224,	49228,
49245†,	49249,	49263,	49268,	49280,	49287,	49290,	49295,	49303,
49328,	49329,	49332,	49337,	49347,	49349,	49354,	49356,	49357,
49359,	49360,	49362,	49378,	49380,	49397,	49399,	49413,	49442,
49448,	49450,	49489,	49494,	49500,	49502†,	49510,	49519,	49535,
49566,	49568,	49577,	49591,	49619,	49621†,	49639,	49666,	49668,
49673,	49681,	49686,	49693,	49706,	49741,	49761,	49766,	49767,
49770,	49772,	49783,	49785,	49803,	49829,	49840†,	49877†,	49878,
49890,	49899,	49904,	49915,	49920,	49923,	49932,	49944,	49949,
49952,	49962,	49973,	49975,	49991,	49996,	49999,	50004,	50007,
50048,	50047,	50050†,	50057,	50065,	50074,	50076,	50085,	50104,
50109,	50110,	50129,	50134,	50143,	50153,	50170†,	50174,	50186,
50189†,	50190†,	50198,	50199,	50211,	50214,	50220,	50229,	50230,
50236,	50237,	50238,	50239,	50243,	50252,	50259,	50262,	50263,
50264,	50265,	50273,	50274,	50288,	50293,	50295,	50296,	50312,
50314,	50315,	50329,	50330,	50333,	50341,	50342,	50345,	50351,
50363,	50364,	50365,	50370,	50377,	50379,	50391,	50392,	50395,
50405†,	50407†,	50410,	50411,	50414,	50416,	50418,	50452,	50455,
50458†,	50466,	50467,	50469†,	50476,	50503,	50504,	50513,	50523,
50529,	50549,	50562,	50571,	50579,	50580,	50581,	50603†,	50606,
50628,†	50663,	50673,	50674,	50684,	50686,	50687,	50700,	50702,
50712,	50716,	50717,	50718,	50719,	50720,	50728,	50746,	50755,
50760,	50772,	50781,	50783,	50813,	50855,	50872,	50873,	50874,
50875,	50876,	50887,	50888,	50893,	50896,	50900,	50911,†	50916†,
50921†,	50924,	50933,	50935,	50937,	50949†,	50958,	50965,	50966†,
50978,	50990,	50996,	51003,	51004,	51005,	51018,	51019,	51024,
51026,	51060,	51064,	51066,	51083,	51084,	51088,	51130,	51147,
51149,	51176,	51177,	51178,	51181,	51193,	51197,	51200,	51209,
51220,	51221,	51222,	51242,	51252,	51256,	51260,	51268,	51281,
51288,	51312,	51324,	51336,	51344†,	51347†,	51352,	51379,	51380,
51389,	51392,	51393,	51394,	51405†,	51415,	51427,	51428,	51429,
51439,	51446,	51450,	51481,	51482,	51490,	51491,	51492,	51494,
51495,	51502,	51509,	51518,	51519,	51520,	51521,	51522,	51537,
51550,	51564†,	51574,	51576,	51587,	51605,	51614,	51626,	51627,
51635,	51647,	51648,	51653,	51662,	51672,	51673,	51690,	51709,
51715,	51716,	51742,	51746,	51754,	51761,	51804,	51818†,	51820,
51824,	51825,	51836,	51843,	51846,	51848,	51853,	51865,	51879,
51888,	51912,	51927,	51953,	51960,	51962,	51965,	51982,	51988,
52030,	52042,	52061,	52062,	52064†,	52065†,	52072,	52074,	52084,
52091,	52102,	52107,	52114†,	52115,	52130,	52148,	52166,	52168,
52181,	52202,	52207,	52208,	52209,	52217,	52218,	52219,	52222†,
52223,	52228,	52231,	52244,	52264,	52265,	52268,	52282†,	52296,
52321,	52348,	52353,	52354,	52366,	52372,	52376,	52382,	52386,
52388,	52389,	52390,	52397,	52398,	52426,	52439,	52449,	52456,
52457,	52465,	52485,	52492,	52497,	52498,	52508,	52512,	52521,
52523,	52529,	52548,	52589,	52602,	52615,	52620,	52621,	52640,
52648,	52653,	52678,	52701†,	52710,	52722,	52727,	52732,	52734,
52743,	52749,	52757,	52762,	52768,	52769,	52770,	52771,	52781,
52782,	52783,	52794,	52800,	52811,	52812†,	52813†,	52817,	52819,
52821,	52823,	52824,	52833,	52837,	52838,	52848,	52849,	52850,
52851,	52852,	52853,	52872†,	52884,	52890,	52893,	52925,	52938,
52939,	52940,	52941,	53023,	53024,	53026,	53027,	53042,	53043,
53046,	53048,	53049,	53051,	53052,	53060,	53070,	53073,	53074,
53094,	53114,	53129,	53182,	53191,	53198,	53199,	53208,	53215,
53235,	53250,	53255,	53256†,	53266,	53267,	53270,	53271,	53272,
53282,	53292,	53300,	53311,	53320,	53321,	53322,	53323,	53324,
53328†,	53346,	53365,	53368,	53374,	53391,	53392,	53436,	53441,
53455,								

B.—Abandoned applications. The applications bearing the following numbers have been accepted and the specifications have been printed but patents have not been sealed thereon within the period prescribed in Section 10 (2) of the Act—

46481,	46514,	46604,	46607,	46611,	46635,	47021,	47178,	47356,
47525,	47588,	47598,	47627,	47889,	47909,	47938,	47977,	47978,
48054,	48058,	48095,	48125,	48165,	48246,	48353,	48389,	48531,
48540,	48542,	48550,	48728,	48736,	48929,	49176,	49221,	49286,
49315,	49338,	49488,	49490,	49584,	49687,	49689,	49690,	49724,
49745,	49848,	49998,	50010,	50081,	50097,	50135,	50139,	50166,
50167,	50180,	50210,	50240,	50402,	50403,	50419,	50653,	50771,
50784,	50914,	51148,	51280,	51282,	51298,	51308,	51353,	51558.
51469,	51552,	51612,	51683,	51760,	51774,	51989,	52001,	

C.—List of applications on which oppositions were filed.

(a) *Opposition to the grant of patents.*

Application No.	Name of Applicant.	Result.
42491	The Distillers Company (Biochemicals) Ltd.	Opposition allowed. A patent will not be sealed on the application.
43481	K. L. Gupta	Disallowed.
43836	Messrs. Godrej Boyce Mfg. Co. Ltd.	1st opposition—Opposition allowed in part. 2nd opposition—Withdrawn. 3rd opposition—Opposition has been allowed in part. A patent will be sealed subject to the amendment of the specification.
43837	Messrs. Godrej Boyce Mfg. Co. Ltd.	1st opposition—Opposition allowed in part. 2nd opposition—Withdrawn. 3rd opposition—Opposition has been allowed in part. A patent will be sealed subject to the amendment of the specification.
43838	Messrs. Godrej Boyce Mfg. Co. Ltd.	1st opposition—Opposition allowed in part. 2nd opposition—Withdrawn. 3rd opposition—Opposition has been allowed in part. A patent will be sealed subject to the amendment of the specification.
44286	P. C. Mistry.	The opposition has been allowed in part. A patent will be sealed subject to the amendment of the specification.

Application No.	Name of Applicant:	Result.
44306	N. D. Daroga, I. K. Panchal and G. B. Gadre.	Pending.
44424	Secretary, Govt. of West Bengal, Deptt. of Commerce and Industry.	Withdrawn.
44964 cognate with No. 44965	N. D. Daroga, I. K. Panchal and G. B. Gadre.	Pending.
44966 cognate with No. 44967	N. D. Daroga, I. K. Panchal and G. B. Gadre.	Pending.
45918	Dr. L. N. Das.	The opposition has been disallowed.
45782	Inventors Industrial Corporation Limited.	The opposition has been allowed in part. A patent will be sealed subject to the amendment of the specification.
45904	A. R. Narayana Rao . . .	Withdrawn.
45985	L. H. Phadke . . .	1st and 2nd oppositions—The oppositions have been allowed in part. A patent will be sealed subject to the amendment of the specification.
46055	The Rajasthan Metal Works .	Dismissed.
46501	N. D. Daroga, I. K. Panchal and G. B. Gadre.	Pending.
46596	Essoldo Circuit (Control) Limited.	Pending.
46598	Essoldo Circuit (Control) Limited.	Pending.
46599	Essoldo Circuit (Control) Limited.	Pending.
46600	Essoldo Circuit (Control) Limited.	Pending.
47231	Adnan Tarcici . . .	Opposition has been allowed in part. A patent will be sealed subject to the amendment of the specification.

Application No.	Name of Applicant.	Result.
47338	Curt Barth.	Pending.
47588	Teja Singh Saggu	Opposition disallowed. A patent will be sealed subject to the amendment of the specification.
47723	Messrs. Mahindra & Mahindra Ltd.	The application for patent has been treated as abandoned.
47858	B. P. Mathias	Pending.
47982	Council of Scientific and Industrial Research.	Withdrawn.
48022	Hindusthan Metal Industries	Disallowed
48314	American Home Products Corporation.	Pending.
48525	Aktiebolaget Separator	Pending.
48770	Sudhir Lal Mukherjee and Albert David Ltd.	Pending.
48771	Sudhir Lal Mukherjee and Albert David Ltd.	Pending.
48943	C. F. Boehringer and Soehne G.m.b.H.	Pending.
49178	Miss A Mohajir, D.S. Datar and S. H. Zaheer.	The opposition has been allowed in part. A patent will be sealed subject to the amendment of the specification.
49258	W. F. DePenning.	The opposition has been allowed in part. A patent will be sealed subject to the amendment of the specification.
49286	Carlo Erba S. p. A.	The opposition has been allowed and the grant of the patent has been refused.
49580	Sudhir Lal Mukherjee and Albert David Ltd.	Pending.
49581	Sudhir Lal Mukherjee and Albert David Ltd.	Pending.

Application No.	Name of Applicant.	Result.
49636	Standard Oil Company. . .	Pending.
49798	Sudhir Lal Mukherjee and Albert David Ltd.	Withdrawn.
50357	Essoldo Circuit (Control) Limited.	Pending.
50485	Garware Finance Corporation .	The opposition has been dismissed.
50925	Sudhir Lal Mukherjee and Albert David Ltd.	Withdrawn.
51175	Sudhir Lal Mukherjee and Albert David Ltd.	Pending.
51479	Dalmia Cement (Bharat) Ltd. .	Pending.
51573	M. S. Wadke	Pending.
51624	Alferd Rudolf Hug	1st Opposition } Pending. 2nd Opposition }
51812	Jenson & Nicholson (India) Ltd.	The opposition has been dismissed.
51831	Kugelfischer Georg Schafer & Co.	Withdrawn.
52394	Council of Scientific and Industrial Research.	Withdrawn.
52477	Mrs. G. K. Doulatram & Mrs. D. K. Samtani.	1st opposition. } Pending. 2nd opposition. } 3rd opposition. }
53058	The Asiatic Oxygen and Acetylene Co., Ltd.	Pending.
53418	The Bharat Carbon & Ribbon Mfg. Co., Ltd.	Pending.
53809	S. B. Penick & Company	Pending.

(b) *Opposition to the petition for extension of term of Patents under Section 215.*

Patent No.	Name of Applicant.	Result.
19395	Dasarathi Coondoo and Bhajakrishna Paul	Opposition allowed.
20709	{ Pipe & Construction Co. of India Sahu Jain Ltd.	1st Opposition. Opposition allowed. 2nd Opposition. Opposition allowed.
22202	{ The Ahmedabad Manufacturing & Calico Printing Co. Ltd. The Gwalior Rayon Silk Mfg. (Wvg.) Co. Ltd.	1st Opposition. Opposition pending. 2nd Opposition. Opposition pending.

(c) *Opposition to the grant of licence on applications under Section 22.*

Patent No.	Name of Applicant.	Result.
43537	{ (1) American Flange & Mfg. Co. Inc. and (2) B. V. Lier . . . }	Pending.

D.—Amendment under the Act and Rules.

(The date given is the date of Gazette of India in which the last notice appeared.)

Patent or Application No.	Date.
34820	December 24, 1955.
34974	September 11, 1954.
41041	June 11, 1955.
41139	April 10, 1954.
41182	April 3, 1954.
41182	January 22, 1955.
42012	May 8, 1954.
42204	August 6, 1955.
42205	August 6, 1955.

Patent or Application No.	Date.
42206	August 6, 1955.
42207	August 6, 1955.
43408	August 6, 1955.
43657	December 3, 1955.
43673	August 6, 1955.
44064	August 6, 1955.
44474	August 6, 1955.
44762	November 20, 1954.
45074	March 19, 1955.
45154	November 26, 1955.
45719	August 6, 1955.
46160	October 15, 1955.
46595	October 15, 1955.
46738	January 23, 1954.
47036	August 6, 1955.
47097	September 18, 1954.
47100	July 24, 1954.
47292	August 14, 1954.
47399	August 7, 1954.
47621	August 6, 1955.
47886	June 12, 1954.
48199	June 25, 1955.
48233	January 8, 1955.
48266	December 17, 1955.
48476	April 3, 1954.
48501	October 1, 1955.
48630	August 7, 1954.
48762	January 2, 1954.
48791	September 11, 1954.
48806	January 15, 1955.
48842	January 9, 1954.
49129	June 5, 1954.
49186	March 6, 1954.
49240	March 27, 1954.
49258	October 23, 1954.
49386	July 9, 1955.
49455	January 22, 1955.
49572	June 25, 1955.
49582	August 20, 1955.

Patent or Application No.	Date.
49657	July 2, 1955.
49661	July 2, 1955.
49662	July 2, 1955.
49749	November 30, 1954.
49769	August 13, 1955.
49853	October 8, 1955.
49863	May 21, 1955.
49922	August 27, 1955.
49926	July 2, 1955.
49930	September 10, 1955.
49992	October 22, 1955.
50027	October 15, 1955.
50028	October 15, 1955.
50030	October 15, 1955.
50062	November 12, 1955.
50132	October 29, 1955.
50203	December 17, 1955.
50394	December 4, 1954.
50459	July 2, 1955.
50468	September 3, 1955.
50472	November 12, 1955.
50502	December 31, 1955.
50578	December 3, 1955.
50617	June 25, 1955.
50790	December 25, 1954.
50883	September 17, 1955.
50962	January 8, 1955.
51133	December 3, 1955.
51206	May 21, 1955.
51340	October 8, 1955.
51382	October 22, 1955.
51566	October 22, 1955.
51760	November 12, 1955.
51789	October 8, 1955.
51963	November 12, 1955.
52349	October 22, 1955.
52702	November 19, 1955.
52964	October 22, 1955.
53076	November 19, 1955.
53238	August 27, 1955.
53599	October 29, 1955.

E.—Restoration of lapsed patents.

Granted: 26686, 26688, 26689, 26690, 26691, 26693, 30189, 30194, 31275, 32861, 34852, 34872, 35210, 37368, 37369, 38257, 39039, 39856, 40274, 40755, 41105, 41259, 42349, 42355, 42465, 42502, 42676, 42937, 43167, 43641, 43971, 44681, 44813, 44887, 44905.

Pending:—26692, 42760, 43100, 43314, 43315, 44674.

F.—Appeals to the Central Government against the decision of the Controller and the Deputy Controller.*Appeal under Section 9.*

Patent No.	Name of Applicant.	Result.
43597	Patent Tiffin Carrier Sangvi & Co.	Appeal rejected by the Central Government and a patent sealed on the application.
45318	Charles Martin Sweet of Lucknow	Appeal rejected by the Central Government and a patent sealed on the application.
42491	Destaquaine Products Ltd. formerly The Distillers Co. (Bio-chemicals) Ltd.	1st Appeal. Appeal rejected by the Central Government.
42491	Ganapatti Sankaran	2nd Appeal. Appeal rejected by the Central Government.

G.—Appeal to the High Court at Calcutta against the decision of the Controller under Section 23F.

Patent No.	Name of Applicant.	Result.
14245	Hiralal Banjara and Rajendra Prasad Varma	Pending.
14245	-do-	Pending.

H. (a) Extension of term of Patents under Section 15 of the Indian Patents and Designs Act.

Patent No.	Name of Applicant.	Result.
19400 } 19428 }	P. M. Madurai & Sons	The Central Government has by an order dated 4th May, 1954 extended the terms of these patents for further terms of 5 years from 21st November 1953 and 1st December 1953 respectively.

Patent No.	Name of Applicant.	Result.
19395	Satish Chandra Coondoo	The Central Government has by an order dated 3rd May 1954, rejected the petition for extension of the term of this patent.
20778	Electric & Musical Industries Ltd.	The Central Government has by an order dated 10th April 1954, extended the term of this patent for a period of 8 years from 13th April 1954.
20037	Joseph Howard Mayhew.	The Central Government has by an order dated 7th January 1955, granted a new patent for a term of three years from 26th June 1954.
20285 and its addition No. 20915	Les Usines de Melle of France.	The Central Government has by an order dated 7th January 1955, rejected the petition for extension of the term of these patents.
20709	Indian Hume Pipe Co. Ltd.	The Central Government has by an order dated 26th November 1955, rejected the petition for extension of the term of this patent.
22197	Electric & Musical Industries Ltd. of England.	The Central Government has by an order dated 18th September 1955, extended the term of this patent for a period of 5 years from 18th September 1955.
22202	Tootal Broadhurst Lee Company Ltd.	Pending.
21968	L. S. Nagarkar . . .	Pending.
21804	Pappu Subha Rao . . .	Pending.
22714	Electric & Musical Industries Ltd. of England.	Pending.

(b) Extension of term of Patent under Section 15 of the Indian Patents and Designs Act.

(Petition for Second Extension.)

Patent No.	Name of Applicant.	Result.
14245	Hiralal Banjara and Rajendra Prasad Varma.	The petition for the Second extension of this patent has not been admitted by the Central Government by an order dated 12th April, 1954.

(c) Extension of term of State Patents.

No petition for extension of the term of State Patents was filed during the period.

I.—Application for licence under Section 22.

Patent No.	Name of Applicant.	Result.
32683 } 32684 }	Director, Haffkine Institute, Bombay.	Application for compulsory licence has been treated as withdrawn by the parties.
43537	Indian Die Casting Co.	Pending.

J.—Correction of clerical errors under Section 62.

43043, 44105, 46809, 46850, 47185, 47354, 48569, 48831, 48984, 49546, 49730, 49948, 50347, 50797, 51305, 51453, 52196, and Hyderabad Patent No. 9/1356F.

K.—Surrender of Patents under Section 24.

Patent No.	Name of the patentee.	Result.
47720	The Firestone Tire & Rubber Co. of U.S.A.	The offer to surrender was accepted and patent revoked.

L.—Alteration of Dates.

Application No.	Date allowed.
<i>(a) Ante-dated to—</i>	
47205	November 4, 1953.
49089	August 23, 1952.
49499	July 7, 1952.
50610	June 5, 1953.
50639	June 27, 1952.
50765	November 3, 1950.
50789	August 6, 1953.
50799	July 24, 1952.
50834	July 24, 1952.
50835	July 24, 1952.
50836	July 24, 1952.
50837	July 24, 1952.
50839	July 24, 1952.
50925	June 25, 1953.
51006	May 1, 1953.
51007	May 1, 1953.
51008	May 1, 1953.
51009	May 1, 1953.
51010	May 1, 1953.
51011	May 1, 1953.
51254	April 22, 1953.
51349	July 20, 1953.
51350	July 20, 1953.
51362	October 27, 1952.
51363	October 27, 1952.
51547	August 4, 1952.
51612	May 29, 1953.
51642	July 6, 1953.
51676	February 11, 1953.
51780	July 28, 1953.
51828	February 24, 1953.
51834	March 11, 1953.
51944	July 20, 1953.
51983	February 20, 1953.
52088	January 14, 1953.
52111	April 22, 1953.
52118	January 19, 1953.
52155	November 6, 1952.

Application No.	Date allowed.
52182	November 28, 1952.
52183	November 28, 1952
52278	January 14, 1953.
52279	January 14, 1953.
52359	June 11, 1953.
52624	May 12, 1953.
52686	March 16, 1953.
52723	May 25, 1953.
52761	April 19, 1954.
52792	July 20, 1953.
52793	July 20, 1953.
52879	May 4, 1953.
52910	August 28, 1953
52919	July 2, 1953.
53949	August 4, 1953.
52964	March 25, 1954.
53072	May 25, 1953.
53124	June 18, 1954.
53547	March 16, 1953.
53659	October 21, 1953.
53700	January 4, 1954.
53824	July 27, 1954.
53864	January 11, 1954.
53865	January 11, 1954.
53957	December 2, 1953.
54056	August 18, 1954.
54073	December 16, 1953.
54135	September 1, 1954.
54136	March 16, 1953.
54140	January 5, 1954.
54161	June 1, 1954.
54188	October 27, 1954.
54194	June 18, 1954.
54195	June 18, 1954.
54380	November 6, 1953.
54398	February 22, 1954.
54423	June 14, 1954.
54424	June 14, 1954.
54454	September 2, 1953.

Application No.	Date allowed.
54506	July 29, 1954.
54521	February 13, 1954.
54566	November 19, 1954.
54616	February 20, 1954.
54667	August 2, 1954.
54718	June 23, 1954.
55007	March 22, 1954.
55219	March 13, 1954.
55220	November 9, 1954.
55229	January 11, 1954.
55317	December 8, 1953.
55392	March 11, 1954.
55553	January 22, 1954.
55561	September 13, 1954.
55852	June 26, 1954.
55895	February 25, 1954.

(b) Post-dated to—

48353	December 16, 1952.
49402	January 19, 1954.
49403	January 19, 1954.
49447	December 26, 1953.
49784	November 4, 1953.
49925	September 19, 1953.
49968	August 23, 1954.
52105	July 16, 1954.

(c) In the following cases the claim to priority dates has been abandoned or disallowed and the applications have been dated as of the date of filing in India or as of a later or earlier date substituted therefor.

Application No.	Date claimed.	Date allowed.
47494—	June 21, 1951.	June 20, 1952.
48122—	September 28, 1951.	September 24, 1952.
48799—	January 17, 1952.	January 16, 1953.
48828—	October 23, 1952.	January 21, 1953.
48844—	January 30, 1952.	January 27, 1953.
48894—	March 6, 1952.	February 2, 1953.
49473—	May 9, 1953.	April 29, 1953.
49529—	May 16, 1952.	May 11, 1953.
49565—	May 17, 1952.	December 11, 1953.
49688—	June 10, 1952.	June 5, 1953.
49750—	June 19, 1952.	June 17, 1953.

Application No.	Date claimed.	Date allowed.
49752—June 19, 1952.	.	June 17, 1953.
49773—July 2, 1952.	.	June 22, 1953.
49800—June 16, 1952.	.	June 25, 1953.
49846—August 5, 1952.	.	July 3, 1953.
48860—July 1, 1952.	.	July 6, 1953.
49875—July 9, 1952.	.	July 8, 1953.
50075—August 27, 1952	.	August 13, 1953.
50140—August 28, 1952	.	August 25, 1953.
50218—September 11, 1953	.	October 8, 1953.
50244—October 17, 1952	.	September 14, 1953.
50384—November 27, 1952	.	October 5, 1953.
50474—October 15, 1952	.	December 12, 1952.
50498—November 10, 1952	.	November 19, 1953.
50511—April 10, 1953.	.	October 28, 1953.
50533—October 22, 1952	.	December 11, 1952.
50629—December 31, 1952	.	November 10, 1953.
50642—November 14, 1952	.	November 13, 1953.
50763—February 4, 1952	.	March 14, 1953.
50811—December 18, 1952	.	December 9, 1953.
50830—September 17, 1953	.	December 14, 1953.
51118—January 26, 1953	.	January 25, 1954.
51199—February 6, 1953	.	February 5, 1954.
51275—February 23, 1953	.	July 16, 1953.
51366—September 3, 1953	.	February 26, 1954.
51370—May 13, 1953	.	February 26, 1954.
51499—April 8, 1953	.	March 16, 1954.
51597—April 2, 1953	.	March 31, 1954.
51714—April 17, 1953	.	April 17, 1954.
51717—May 1, 1953	.	April 19, 1954.
51760—March 11, 1953	.	March 11, 1954.
51798—May 1, 1953	.	April 29, 1954.
51827—May 13, 1953	.	May 5, 1954.
51964—June 10, 1953	.	May 22, 1954.
52046—July 17, 1953	.	June 29, 1954.
52154—June 10, 1953	.	June 17, 1954.
52298—July 14, 1953	.	May 20, 1954.
52490—August 14, 1953	.	August 5, 1954.
52545—October 6, 1953	.	August 16, 1954.
52574—August 24, 1953	.	August 19, 1954.

Application No.	Date claimed.	Date allowed.
52617—	August 26, 1953	August 25, 1954.
52692—	September 4, 1953	September 7, 1954.
52926—	October 23, 1953	October 15, 1954.
52966—	October 26, 1953	October 2, 1954.
53003—	November 25, 1953	October 27, 1954.
53232—	December 15, 1953	November 29, 1954.
53754—	February 22, 1954	February 9, 1955.
53862—	February 23, 1954	February 22, 1955.
53887—	February 26, 1954	February 25, 1955.
53888—	February 26, 1954	February 25, 1955.
54163—	May 24, 1954	March 29, 1955.

M.—Assignments, licences or other transactions affecting the interests of the original patentees have been registered in respect of the following patents. The number of each patent is followed by the name of the applicant for registration :—

22968 } 23601 }	Buell (1952) Limited.	29478 } 29479 }	International Combustion
23620 } 23621 }	Massey—Harris—Ferguson	30113 }	(Export). Limited.
24000 }	(Manufacturing) Limited.	31374	Gujarat Rubber Works Ltd.
	American Sisalkraft Corpora- tion.	31526	Chandrakant Bhujaballi Gar- gatti and Nirmal Kumar Bhujaballi Gargatti.
24850	International Combustion (Ex- port) Limited.	31536	(1st) The Pre-Stressed Con- crete Co. Ltd.
25993	Buell (1952) Limited.		(2nd) Dow-Mac (Products) Ltd.
26231 } 26232 }	Saint Freres.	31933	Willy Motors Inc.
26509 }	Gujarat Rubber Works Limited.	32041	Willy Motors Inc.
26993 } 27074 }	International Combustion (Ex- port) Limited.	32483	W. R. Grace & Co.
27470	Gujarat Rubber Works Limited.	32543	Hermorion Limited.
27907	Appasheb Bhujaballi Gar- gatti.	32667	Imperial Chemical Industries Limited.
28005	The President of India.	32683 } 32684 }	1st } Governor of Bombay. 2nd }
28340	Johnson and Johnson (Gt. Britain) Limited.	32696	Almin Patents Limited.
28424	The President of India.	32965	The Express Lift Company Limited.
28867	1st } British Bewoid Com- 2nd } pany Limited.	33053	(1st) George Royston & Son Limited.
29075	The Associate Cement Com- panies Limited.		(2nd) Douglas Buckley Royston.

33286 }	Accurate Tools (Saunders) Limited.	39146	Mrs. Mildred Francis Cardis.
33287 }		39214	Crompton Parkinson Limited.
33288 }		39219	Filtration and Water softening Proprietary Ltd.
33592	(1st) The Best Foods, Inc.	39232	Imperial Chemical Industries Limited.
	(2nd) Roschold Packing Company.	39302	Burn & Company Limited.
33835	The Indian Oxygen and Acetylene Company Limited.	39588	Crompton Parkinson Limited.
34911 }	Crompton Parkinson Limited	39919	Concast A. G.
34912 }		40288 }	S. Guiterman & Co. Ltd.
34948 }	Phiroze Kekobad Bhappu.	40297 }	
34949 }		40408 }	Eaton Manufacturing Company.
35011	National Chemical Products Limited.	40423 }	
35024 }	Phiroze Kekobad Bhappu.	40578	Crompton Parkinson Limited.
35025 }		40650	Massey-Harris-Ferguson (Manufacturing) Limited.
35032 }	(1st) Dame Violet Chilton Haworth.	40706	Cyprane Limited.
35033 }	(2nd) National Research Development Corporation.	40712	Almin Patents Limited
35228	Imperial Chemical Industries Limited.	40717 }	The Indian Hume Pipe Company Ltd.
35324	Willy Motors Inc.	40718 }	
35760	Bata Shoe Company, Inc.	40725	F. L. Smidth & Co. A/S.
36039	The Distillers Company Limited.	40807	Triumph Equipment Co.
36097	W. R. Grace & Co.	40815	R. A. Brand & Co. Limited.
36188	McKee Development Corp.	40827	The Pyrene Company Limited.
36232	Sitharamaiyer Narayani Ammal, and Narayanaiyer Rugmani.	40968 }	The President of India.
36531	Imperial Chemical Industries of Australia and New Zealand Limited.	40969 }	
37138	Laurens Rijnhart Boisservain.	40970 }	
37203	International Combustion (Export) Limited.	41063	National Research Development Corporation of India.
37214	Hession Microsol Corporation.	41077	Burn & Company Limited.
37368	Jehangir Maneckji Cooper.	41190 }	Societe D'Etudes Et De Participations Eau, Gaz, Electricite, Energie, S. A.
37959	Dexion Limited.	41191 }	
38060	Bartev Limited.	41242	Edwin Lysle Gustus.
38307	Metropolitan-Vickers Electrical Company Limited.	41550	Concast A. G.
38470	National Research Council.	41600	Societe D'Etudes Et De Participations, Eau, Gaz, Electricite, Energie, S. A.
38483 }	F. L. Smidth & Co. A/S.	41611	N. V. De Bataafsche Petroleum Maatschappij.
38484 }		41661	Burn & Company Limited.
38612	Deoraj Daulatraj Singhvi and Rishiraj Mahendraraj Singhvi.	41760	Hendrick Jan Veenendaal and Marinus Houpt.
38796	International Combustion (Export) Limited.	41777	Standard Telephones and Cables Limited.
		41784	M. L. Dalmia & Co. Ltd.
		41872	Hendrick Jan Veenendaal and Marinus Houpt.
		41940	Almin Patents Limited.
		42179	The Electric Storage Battery Company.
		42283 }	Bartev Limited.
		42284 }	

42308	Cyprane Limited.	44035	William Ferguson Cook, Theodore Osmund Daniel Jansen Eric James St. Olave Richardson.
42345	Merck & Co., Limited.	44067	A B Svenska Maskin-Verken.
42410	Flexico Intercontinental So- ciete Anonyme.	44081	International Combustion (Ex- port) Limited.
42471	Ferrolux Limited.	44136 }	Poor & Company.
42492	The Distillers Company Limi- ted.	44137 }	
42506	Styrene Products Limited.	44145	The Champion Paper Company Ltd.
42510	British Electrical & Pumps Limited.	44258	Decraj Daulatraj Singhvi and Rishiraj Mahendraraj Singhvi.
42514	Laxmidutt Roopchand.	44259	Indian Telephone Industries Limited.
42542	Farbenfabriken Bayer Aktien- gesellschaft.	44274	Flexico Intercontinental Soci- ete Anonyme.
42566	Food Machinery and Chemical Corporation.	44300	The Nest Food, Inc.
42569	Bata Shoe Company, Inc.	44324	Robert Cotton Barnacle Will- iam Ferguson Cook and Theodore Osmund Daniel Jansen.
41675	Paper Tubes (Bury) Limited.	44415 }	L. Givaudan E. G. et. S. A
42700	S. K. Kabbur Ltd.	44416 }	
42772	A. B. Svenska Maskin-Verken.	44417 }	
42885	The President of India.	44418 }	
42910	Crompton Parkinson Limited.	44520	Indian Telephone Industries Limited.
42937	P. N. Karve.	44629	Farbenfabriken Bayer Aktiengesellschaft.
43043	Rheinpreussen Aktiengesell- schaft fuer Berbau and Chemie.	44649	Indian Telephone Industries Limited.
43045	Crompton Parkinson Limited.	44674	W. H. Haron & Co. Ltd.
43133	SKF Kugellagerfabriken Gesel- lschaft mit beschränkter Haftung.	44697	ACF Industries, Incorporated.
43208	Bartrev Limited.	44768	Indian Telephone Industries Limited.
43309	W. Schlafhorst & Co.	44810	Edith Menicoll.
43357	Concast A. G.	45024	Styrene Products Limited.
43550	{ (1st) Volkart Brothers. (2nd) Voltas Limited.	45108	Indian Telephone Industries Limited.
43580	S. Guiterman & Co. Ltd.	45132	Automatic Telephone and Electric Company Ltd.
43583	Farbenfabriken Bayer Akti- engesellschaft.	45220 }	Leon Duesberg Sr. and Henri Duesberg.
43597	Gamanlal Kalidas Kansara.	45221 }	
43650	M. L. Dalmiya & Co. Ltd.	45224 }	Hermorian Limited.
43678 }	Farbenfabriken Bayer Akti- engesellschaft.	45225 }	
43679 }		45228	Carrier Corporation.
43683	Burn & Company Limited.	45257 }	Hermorian Limited.
43789	Farbenfabriken Bayer Akti- engesellschaft.	47258 }	
43795	Leonard Fuller and Edmund William Sudlow.	45282	Vereinigte Oesterre-Chische Eisen-Und Stahlwerke Akti- engesellschaft.
44812	The President of India.	45310	Tootal Broadhurst Leo Company Limited.
43863	Kalinga Tubes Limited.		
43983	Robert Cotton Barnacle William Ferguson Cook and Eric James St. Olave Rich- ardson.		

45371	Bartrev Limited.	46455	Olympia Werke Aktiengesellschaft.
45377	F. L. Smidth & Co. A/S	46459	The Central Government in the Ministry of Information and Broadcasting, New Delhi.
45468	(1st) Cambata Industries Limited.	46504.	Farbenfabrieken Bayer Aktiengesellschaft.
	(2nd) Landsborough Findlay Rhodesia Limited.	46528	A B Svenska Maskin-Verken.
45536 }	Rheinpreussen Aktiengesellschaft fuer Bergbau and	46549 }	Indian Telephone Industries Limited.
45537 }	Chemie.	46550 }	
45553 }		46551 }	
45556	Edward Day Andrews.	46564	F. L. Smidth & Co. A/S
45570 }	Union Miniere Du Haut-	46595 }	Rheinpreussen Aktiengesellschaft fuer Bergbau and
45572 }	Katanga, Societe Congolaise.	46653 }	Chemie.
45603	Carrier Corporation.	46676	American Home Products Corporation.
45656	Rheinpreussen Aktiengesellschaft fuer Bergbau and Chemie.	46687	Farbenfabrieken Bayer Aktiengesellschaft.
45708	G y r e a c t a Transmissions Limited.	46738	Under Secretary to the Government of India, Ministry of Finance, Department of Economic Affairs.
45734 }	Rheinpreussen Aktiengesellschaft fuer Bergbau and	46777	Merck & Co., Inc.
45735 }	Chemie.	46835	Asshi Kasei Kogyo Kabushiki-Kaisha.
45757	Indian Telephone Industries Limited.	46915	Arvey Corporation.
45771	Cable Covers Limited.	46943	Indian Telephone Industries Limited.
45774	Rheinpreussen Aktiengesellschaft fuer Bergbau and Chemie.	46954	Farbenfabrieken Bayer Aktiengesellschaft.
45783	Investigacao E Exploracao Industrial (S.A.R.L.)	46974	Zdenek Martin Burda.
45872 }	Indian Telephone Industries	47007	Burn & Company Limited.
45873 }	Limited.	47015 }	Farbenfabrieken Bayer Aktiengesellschaft
45903	A. N. Shrinivasan Rao.	47016 }	
45918 }	Fred Henry Camphausen and	47022 }	Jack Imber.
45919 }	Edward William Hillier.	47023 }	
45993	Poor and Company.	47033	Burn & Company Limited.
45160	Rheinpreussen Aktiengesellschaft fuer Bergbau and Chemie.	47065	Kartick Chundra Dutta.
46184	Hermorian Limited.	47135	The Glacier Metal Company Limited.
46287	O r g a n o n Laboratories, Limited.	47227	The President of India.
46304	Indian Telephone Industries Ltd.	47166	Farbenfabrieken Bayer Aktiengesellschaft.
46305	Olympia Werke Aktiengesellschaft.	47248 }	
46314	Patents and Investments Limited.	47249 }	
46317	A B Svenska Maskin-Verken.	47250 }	Merck & Co., Inc.
46346	Pamlen Limited.	47251 }	
46406	Styrene Products Limited.	47320	W. R. Grace & Co.
46448	Protona, Produktionsgesellschaft fur Elektro-Akustische Gerate, G.m.b.H.	47352	Kutouddin Abdeali Contractor.
		47411	The President of India.

47440	Instart Diesel Components Limited.	48881	The Glacier Metal Company Limited.
47475 } 47476 }	Indian Telephone Industries Limited.	48909 } 48910 } 48911 } 48913 } 48914 }	Indian Telephone Industries Limited.
47506	"Shell" Research Limited.	49027	"Shell" Research Limited.
47508	Tootal Broadhurst Lee Company Ltd.	49043	Farbenfabriken Bayer Aktiengesellschaft.
47650	The Asahi Chemical Industry Co., Ltd.	49074	The Glacier Metal Company Limited.
47683	Carrier Corporation.	49111 } 49112 } 49113 } 49294 }	Indian Telephone Industries Limited.
47715	The President of India.	49417	The M. W. Kellogg Company.
47724	The Asahi Chemical Industry Co. Ltd.	49427 } 49428 } 49429 } 49430 } 49431 }	The Dow Chemical Company.
47769	"Shell" Research Limited.	49528 } 49588 }	Indian Telephone Industries Limited.
47809 } 47810 }	Aeroplane and Motor Aluminium Castings Limited.	49659	The Tata Iron & Steel Company Limited.
47859	Indian Telephone Industries Limited.	49688	The British Internal Combustion Engine Research Association.
47885	The Glacier Metal Company.	49769	"Shell" Research Limited.
48036	Fairbairn Lawson Combe Barbour Limited.	49784	Aeroplane and Motor Aluminium Castings Limited.
48077 } 48078 } 48079 }	Indian Telephone Industries Limited.	49804	International Combustion (Export) Limited.
48084	Merck & Co., Inc.,	49945	American Cyanamid Company
48209	"Shell" Research Limited.	50017	Indian Telephone Industries Limited.
48367	Farbenfabriken Bayer Aktengesellschaft.	50029	"Shell" Research Limited.
48416	Alfred Gregory Imber.	50165	Bata Shoe Company Limited.
48448	Indian Telephone Industries Limited.	50202 } 50203 }	Chandulal Dalsukhbhai Parikh and Baburay Vasantry Royal.
48482	E. P. Barrns (concessionaries) Limited.	50257	Westrex Corporation.
48509	Indian Telephone Industries Limited.	50358	The Electrolyser Corporation Ltd.
48549	Investigacao E Exploracao Industrial (S.A.R.L.)	50488 } 50555 }	Olympia Werke Aktiengesellschaft.
48616	Ferro Corporation.		
48619	Kubeice Limited.		
48649	The Firestone Tire & Rubber Company.		
48787	Indian Telephone Industries Limited.		
48795	The President of India.		
48805	Indian Telephone Industries Limited.		

50610	The British Internal Combustion Engine Research Association.	51443	International Combustion (Export) Limited.
50678	International Combustion (Export) Limited.	51478	Indian Telephone Industries Limited.
50751	SOLUBRE, Societe Luxembourgeoise d' Etudes et d' Exploitation de Brevetes.	51542	Heberlein & Co. A.G.
51164	The President of India.	51668	Heberlein & Co. A.G.
51207	Heberlein & Co. A.G.	51702	Indian Telephone Industries Limited.
51254	The Dow Chemical Company.	52118	
51263	Chandulal Dalsukhbhai Parikh and Baburay Vasantray Royal.	52182	
		52183	
		52278	
		52279	
		52344	Shri Ram Institute for Industrial Research.

PART IV.

Patents in force up to 31st December 1955.

16189,	18107,	18344,	18378,	19164,	19168,	19400,	19428,	20037,	20088,
20778,	21573,	21582,	21629,	21672,	21723,	21730,	21774,	21780,	21799,
21804,	21846,	21950,	21951,	21968,	21976,	21986,	21997,	22007,	22019,
22027,	22036,	22056,	22069,	22082,	22133,	22136,	22143,	22149,	22166,
22197,	22239,	22258,	22276,	22281,	22305,	22326,	22395,	22406,	22408,
22410,	22422,	22443,	22465,	22467,	22474,	22480,	22501,	22514,	22516,
22517,	22534,	22543,	22551,	22556,	22559,	22563,	22589,	22590,	22592,
22596,	22621,	22642,	22647,	22653,	22714,	22724,	22725,	22729,	22730,
22745,	22760,	22761,	22783,	22810,	22862,	22864,	22876,	22879,	22887,
22909,	22915,	22919,	22936,	22940,	22968,	22970,	22993,	23005,	23030,

23032,	23042,	23054,	23063,	23069,	23095,	23116,	23121,	23135,	23136,
23137,	23159,	23178,	23179,	23200,	23201,	23209,	23212,	23228,	23229,
23232,	23233,	23234,	23235,	23242,	23247,	23286,	23310,	23315,	23326,
23327,	23368,	23376,	23401,	23435,	23448,	23486,	23499,	23530,	23536,
23539,	23555,	23556,	23596,	23601,	23607,	23613,	23620,	23621,	23625,
23664,	23693,	23699,	23700,	23705,	23706,	23707,	23709,	23710,	23713,
23739,	23744,	23759,	23760,	23780,	23795,	23807,	23814,	23815,	23818,
23840,	23856,	23858,	23859,	23878,	22884,	23889,	23894,	23902,	23903,
23904,	23916,	23940,	23987,	24000,	24001,	24004,	24006,	24017,	24032,
24037,	24044,	24049,	24051,	24052,	24062,	24073,	24157,	24175,	24176,

24190,	24191,	24195,	24198,	24202,	24203,	24205,	24212,	24218,	24221,
24225,	24235,	24237,	24238,	24240,	24331,	24333,	24349,	24353,	24380,
24385,	24400,	24412,	24446,	24447,	24468,	24482,	24491,	24497,	24501,
24502,	24528,	24531,	24546,	24555,	24570,	24576,	24585,	24586,	24601,
24614,	24632,	24634,	24654,	24677,	24708,	24712,	24788,	24789,	24805,
24816,	24820,	24832,	24834,	24836,	24845,	24850,	24889,	24890,	24891,
24892,	24893,	24894,	24898,	24900,	24936,	24952,	24954,	24963,	24978,
24989,	24997,	25014,	25031,	25054,	25081,	25092,	25100,	25105,	25108,
25125,	25147,	25150,	25151,	25169,	25170,	25188,	25193,	25198,	25199,
25209,	25218,	25219,	25223,	25227,	25233,	25235,	25241,	25248,	25277,

25281,	25289,	25291,	25303,	25329,	25331,	25339,	25343,	25361,	25370,
25382,	25389,	25412,	25424,	25431,	25461,	25462,	25464,	25470,	25471,
25484,	25492,	25523,	25528,	25538,	25544,	25579,	25585,	25589,	25604,
25607,	25608,	25609,	25614,	25616,	25619,	25630,	25631,	25659,	25661,
25670,	25682,	25695,	25696,	25698,	25716,	25723,	25768,	25788,	25794,
25801,	25822,	25844,	25856,	25859,	25862,	25864,	25912,	25917,	25918,
25926,	25941,	25954,	25963,	25975,	25993,	26002,	26004,	26012,	26035,
26058,	26059,	26086,	26092,	26093,	26094,	26105,	26130,	26137,	26152,
26172,	26175,	26181,	26182,	26201,	26215,	26222,	26225,	26231,	26232,
26233,	26254,	26277,	26287,	26298,	26299,	26303,	26306,	26307,	26342,

26344,	26351,	26386,	26388,	26399,	26414,	26418,	26422,	26423,	26448,
26449,	26451,	26482,	26490,	26491,	26503,	26509,	26510,	26513,	26529,
26543,	26550,	26551,	26560,	26570,	26581,	26589,	26591,	26592,	26600,
26607,	26617,	26629,	26631,	26632,	26635,	26642,	26643,	26644,	26645,
26657,	26666,	26669,	26671,	26672,	26676,	26678,	26686,	26688,	26689,
26690,	26651,	26692,	26693,	26699,	26702,	26704,	26709,	26710,	26713,
26714,	26721,	26735,	26736,	26737,	26738,	26750,	26756,	26759,	26764,
26770,	26777,	26798,	26803,	26804,	26828,	26829,	26845,	26850,	26857,
26868,	26869,	26870,	26872,	26882,	26902,	26930,	26941,	26945,	26948,
26951,	26962,	26963,	26967,	26989,	26993,	27007,	27012,	27020,	27022,

27025,	27026,	27028,	27032,	27036,	27043,	27044,	27048,	27054,	27073,
27074,	27082,	27085,	27092,	27093,	27103,	27106,	27107,	27108,	27109,
27116,	27118,	27129,	27133,	27135,	27138,	27142,	27146,	27148,	27166,
27171,	27176,	27178,	27182,	27183,	27185,	27205,	27206,	27209,	27214,
27218,	27219,	27221,	27229,	27254,	27256,	27257,	27277,	27283,	27291,
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27552,	27561,	27573,	27574,	27578,	27582,	27598,	27616,	27620,	27625,
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27747,	27749,	27753,	27756,	27766,	27779,	27780,	27785,	27800,	27803,
27804,	27806,	27807,	27810,	27830,	27840,	27845,	27848,	27850,	27854,
27874,	27875,	27878,	27880,	27905,	27907,	27914,	27915,	27916,	27917,
27918,	27919,	27925,	27938,	27941,	27942,	27944,	27969,	27971,	27992,
27993,	27999,	28002,	28003,	28005,	28009,	28010,	28012,	28022,	28028,
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28112,	28113,	28115,	28120,	28122,	28123,	28143,	28144,	28145,	28151,
28155,	28169,	28171,	28178,	28183,	28185,	28208,	28219,	28220,	28221,
28223,	28226,	28233,	28234,	28235,	28249,	28250,	28274,	28275,	28278,
28282,	28287,	28288,	28302,	28314,	28330,	28340,	28345,	28363,	28364,
28366,	28374,	28379,	28392,	28393,	28407,	28408,	28420,	28423,	28429,
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28491,	28501,	28515,	28531,	28542,	28545,	28546,	28548,	28551,	28570,
28575,	28591,	28596,	28600,	28603,	28623,	28638,	28645,	28654,	28656,
28671,	28686,	28699,	28700,	28704,	28710,	28722,	28723,	28724,	28726,
28732,	28743,	28749,	28751,	28752,	28753,	28762,	28768,	28769,	28770,
28778,	28783,	28790,	28795,	28799,	28800,	28813,	28816,	28823,	28824,
28835,	28836,	28838,	28848,	28850,	28853,	28858,	28862,	28867,	28868,
28878,	28881,	28882,	28887,	28891,	28896,	28914,	28922,	28925,	28940,
28944,	28950,	28951,	28953,	28957,	28968,	28971,	28972,	28976,	28979,
28981,	28982,	28983,	28989,	28992,	28994,	28999,	29004,	29012,	29015,
29016,	29024,	29027,	29028,	29033,	29040,	29041,	29056,	29071,	29073,
29075,	29076,	29077,	29080,	29082,	29093,	29096,	29105,	29118,	29121,
29134,	29137,	29138,	29159,	29161,	29179,	29181,	29199,	29200,	29208,
29212,	29222,	29239,	29242,	29243,	29261,	29262,	29265,	29273,	29275,
29286,	29288,	29290,	29291,	29292,	29294,	29296,	29305,	29306,	29316,
29318,	29320,	29321,	29336,	29338,	29339,	29340,	29341,	29342,	29343,
29344,	29345,	29356,	29357,	29358,	29369,	29374,	29383,	29396,	29444,
29473,	29477,	29478,	29479,	29480,	29482,	29483,	29493,	29502,	29520,
29523,	29541,	29542,	29548,	29552,	29555,	29563,	29564,	29572,	29580,
29585,	29592,	29593,	29594,	29605,	29614,	29616,	29617,	29625,	29626,
29627,	29654,	29657,	29662,	29669,	29686,	29709,	29711,	29714,	29715,
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52100	52101	52103	52104	52106	52108	52109	52111	52113	52116
52117	52118	52119	52121	52124	52134	52135	52136	52137	52138
52139	52141	52142	52143	52144	52146	52147	52149	52152	52155
52158	52159	52160	52161	52162	52163	52164	52167	52170	52171
52172	52173	52174	52175	52176	52178	52180	52182	52183	52184
52186	52187	52188	52189	52190	52191	52193	52194	52195	52196
52197	52198	52200	52201	52203	52205	52210	52211	52212	52214
52215	52225	52226	52227	52229	52230	52232	52235	52237	52238
52240	52242	52243	52251	52253	52254	52255	52256	52257	52259

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52291	52292	52293	52294	52295	52297	52298	52300	52302	52304
52305	52306	52307	52308	52311	52312	52313	52314	52315	52316
52318	52320	52322	52324	52326	52327	52330	52331	52332	52333
52338	52341	52344	52346	52347	52349	52350	52355	52356	52359
52361	52363	52367	52369	52370	52371	52374	52375	52378	52379
52381	52383	52384	52392	52393	52395	52396	52399	52400	52403
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52452	52454	52455	52460	52463	52464	52467	52468	52472	52473
52474	52476	52478	52479	52480	52481	52482	52483	52484	52497
52496	52500	52502	52503	52509	52510	52515	52518	52519	52520
52524	52525	52526	52527	52532	52533	52535	52536	52537	52539
52542	52544	52545	52546	52551	52552	52553	52556	52557	52559
52560	52561	52562	52563	52564	52566	52568	52569	52570	52571
52572	52573	52581	52584	52588	52593	52594	52595	52596	52599
52600	52601	52606	52607	52616	52617	52618	52623	52624	52629
52630	52631	52632	52633	52635	52636	52637	52638	52639	52641
52644	52645	52646	52649	52652	52656	52657	52662	52663	52664

52665	52668	52670	52676	52679	52680	52686	52687	52689	52690
52692	52693	52694	52697	52700	52702	52703	52704	52705	52706
52707	52708	52709	52716	52718	52720	52723	52724	52728	52730
52733	52736	52737	52738	52742	52744	52751	52753	52754	52759
52760	52761	52764	52767	52772	52773	52774	52776	52778	52779
52785	52787	52791	52792	52793	52803	52806	52808	52809	52826
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52866	52867	52868	52870	52876	52877	52878	52879	52882	52885
52886	52887	52889	52897	52898	52901	52903	52904	52907	52910
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52927	52928	52929	52932	52947	52948	52953	52954	52957	52958
52959	52963	52964	52966	52967	52968	52971	52976	52977	52982
52983	52984	52985	52986	52988	52990	52991	52992	52993	52997
52998	52999	53000	53001	53003	53009	53012	53015	53018	53021
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53068	53072	53076	53082	53083	53085	53086	53087	53088	53092
53093	53095	53097	53098	53102	53103	53105	53109	53110	53111
53112	53115	53117	53118	53121	53126	53127	53140	53141	53149
53151	53155	53159	53160	53163	53164	53166	53175	53176	53177
53178	53179	53181	53184	53186	53189	53192	53202	53205	53209

53212	53213	53214	53219	53223	53226	53227	53231	53233	53234
53238	53239	53245	53248	53260	53261	53263	53265	53268	53274
53277	53278	53283	53286	53287	53294	53302	53308	53309	53312
53318	53327	53327	53329	53331	53334	53342	53344	53345	53347
53359	53363	53364	53367	53386	53389	53403	53405	53407	53409
53411	53412	53439	53446	53449	53453	53459	53468	53472	53474
53478	53479	53489	53495	53510	53512	53513	53517	53518	53521
53524	53547	53548	53549	53563	53564	53571	53575	53576	53577
53581	53584	53587	53590	53591	53593	53599	53604	53606	53616
53626	53627	53648	53659	53664	53665	53669	53673	53677	53684

53685,	53687,	53692,	53697,	53700,	53710,	53712,	53718,	53724,	53725,
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53841,	53861,	53864,	53865,	53869,	53891,	53893,	53897,	53925,	53929,
53941,	53946,	53949,	53961,	53963,	53966,	53995,	54004,	54024,	54029,
54039,	54053,	54054,	54063,	50073,	54087,	54088,	54097,	54099,	54104,
54124,	54129,	54136,	54138,	54139,	54140,	54153,	54159,	54161,	54162,
54175,	54188,	54369,	54370,	54380,	54454,	54566,	54663,	54671.	

PART V.

Designs Registered During The Year 1954-55.

The following designs were registered under the Indian Patents and Designs Act, 1911, during the years 1954 to 1955. The number included in each entry is the registration number of the design. The date following each entry is the date of registration of the design included in that entry. The dates shown in crescent brackets are the dates allowed under Section 78-A of the Act.

1954

CLASS I.—Articles composed wholly of metal or in which metal predominates and jewellery.

Allied Metal Corporation; 315, Railway Road, Aligarh, U.P. 80455. November 8, 1954. A padlock.

Amalgamated Engineers, Aish Bagh Road, Lucknow (Uttar Pradesh). 77577, December 3, 1953. Steel belt lacing.

Armstrong Patents Co., Limited, of Eastgate, Beverly, Yorkshire, England. 78927 to 78929, May 19, 1954. A shock absorber casing.

Arumugam Type Foundry, The, 43, Broadway, Madras. 78568, March 26, 1954. Tamil type fonts.

Asian Industries, Manufacturers of Tricycles and Cycles, Railway Road, Jullundur City, Punjab. 77781, December 28, 1953. Tricycle.

Balkishan Dass, son of Shree Raghunath Dass, Proprietor: The unbreakable State Manufacturing Co., of Gandhi Market, Saddar Bazzar, Delhi. 78643, April 1, 1954. Nut & Bolt assembly.

Bansilal Thakordas Kansara of Takfalia Gandebe, Via Billimora, Dist. Surat, Bombay. 77751, December 26, 1953. Beetle leaf or pan container.

Benjamin Electric Limited, The, of Brantwood Works, Brantwood Road, Tottenham, London N. 17. England. 77782. (October 15, 1953.) Trough reflector for fluorescent electric light.

Birendra Kumer Jain, Son of Rajendra Kumar Jain of No. 73, Upper Circular Road, Calcutta. 79440, July 20, 1954. Reflectors for petromax lamps.

Bombay Iron & Steel Works of 563, Nana Peth, Poona City, Bombay. 78375 and 78376, March 3, 1954. Boxes.

Boroda Type Foundry, 22/5B, Jhama-pooker Lane, Calcutta-9. 78921, May 18, 1954. Bengali type faces.

Bright Brothers Limited, of 156A, Tardeo Road, Bombay-7. 78099, February 1, 1954. Holder of Book Matches. 79242 June 21, 1954. Road makers.

(1) Chandulal Sakhalchand Shah (2) Chandulal Somalal Shah, (3) Somalal Khushaldas Gilder (4) Jethalal Somaji Shah and (5) Naranji Dulabhji Patel, 380 Girgaon Road, Bombay-2. 77535, November 28, 1953. A bolt.

(Mrs.) Clarice Kichler Robert. of Great Eastern Hotel, 1 to 3 Old Court House Street, Calcutta-1. 80233, October 18, 1954. Coffee filter. 80234 and 80235, October 18, 1954. A component part of a coffee filter.

Clipper Pen Co., The, National Insurance Building, P.O. Box No. 1877, 204, Hornby Road, Fort Bombay. 78151. February 6, 1954. Fountainpen clips.

Curt Barth of Porbunder Castle, 3rd Pasta Lane, Colaba, Bombay 5. 79407, July 5, 1954. A stove.

Datta Industries, 148, Kasbapeth, Poona City. 79930, September 18, 1954. Wick lamps.

(Messrs.) Don Watson & Co. Ltd., 19, British Indian Street, Calcutta. 78732 and 78733, April 12, 1954. Metal bobbins.

Dwarkesh Metal Works, Kaserat Katra, Mathura, (Uttar Pradesh) 78934, May 21, 1954. A pitcher with cover. 80564, November 17, 1954. A pitcher.

Ernest Rosner, 55, Gariahat Road, Calcutta-19. 78470, March 15, 1954. Casings for electric bells buzzers and like apparatus.

Eureka Type Foundry Ltd., Giribab Lane, Calcutta-12. 78018, January 22 1954. Bengali type faces.

- Fritz Graetz, of Nettenscheld 24, Altena (Weslf.) Germany, and Ballabhadas Agrawal, of 12, Cullen Place, Howrah. 78893 and 78894, May 14, 1954. A bottle opener.
- Gazi Mohd Sadiq Ali, son of Amjad Ali Khan, Sohbatia Bagh, Raja Bazar, Lucknow (Uttar Pradesh). 78129 and 78130, February 2, 1954. Ring; 79721, August 26, 1954. Ring.
- Ghias Uddin, son of Hajiz Abdul Ghaffar, trading as Ghias Dibya Factory, Darogha Ghulam Rasul Street, Sadar Bazar, Delhi-6. 79111, June 9, 1954. Tray made of tin.
- Gobindram Mulchand Gidwani, 3/39, Deb Nagar Karolbagh, New Delhi-5. 77316. October 26, 1953. A toy known as Gyroscope toy.
- Hazi Abdul Razak Chotumia Delhiwalla, C/o. Delhi Trunk Factory, 83, Narsingpura, Jail Road, Bombay 9, 77223 and 77224. October 19, 1953. Trunks; 78255 and 78256, February 22, 1954. Trunks; 78049 to 78052, January 25, 1954. Trunks.
- Indian Iron & Steel Company Limited, The, of No. 12, Mission Row, Calcutta. 79080, June 2, 1954. Flushing cisterns for lavatories and urinals.
- (Messrs.) J. C. Hui & Company, of 8-B. Lallbazar Street, Calcutta. 78503, March 18, 1954. Bengali type faces; 78504, March 18, 1954. Hindi type faces.
- Joginder Singh Gurcharan Singh, General Merchants, Bazar Kathian, Amritsar (P.B) 79231, June 22, 1954. Pant hooks.
- Kandathil Chacko Abraham, sole Proprietor of Chason & Co., Type founders, 30, Mount Road, Madras-2. 78349, February 27, 1954. Malayalam printing type faces.
- Kanjibhai Narsibhai Bijlani, Kamala Bhavan, Agra Road, Ghatkopar, Bombay. 78168. February 11, 1954. Metal Frames for Mirrors.
- Kartar Singh Dhanjal, Proprietor: A.K.D. & Co., Village Kalokari, P.O. Jungpura. New Delhi-14. 79543, August 2, 1954. An electric emersion.
- Krishan Lal Suri, son of Ram Chand Suri, trading as Arcee Industries, 788, East Park Road, Karol Bagh, New Delhi-5. 79910, September 15, 1954. Food masher.
- Krudd Industries Ltd., 20/21. Stephen House, Dalhousie Square, Calcutta. 80001, September 27, 1954. Ladies.
- Lakhani Company (Indian partnership-firm) of 29-A, Sea Castle, opposite to Tilak Statue, Chaupatty, Sea Face, Chaupatty, Bombay-7, 79880, September 13, 1954. Rotary collar for ashtray.
- Laxmi Kant Deshmukh of Arvi District, Nagpur and Ripin Bhimaklal Dikshit, of "Avenue House" (Top floor), Chowringhee Square, Calcutta. 79158, June 11, 1954. Farmers plough.
- M Y. Asim & Co., 324, Bhendi Bazar, Bombay-3. 79588, August 7, 1954. "Spoon." 79589, August 7, 1954. Spoon handle.
- Mahabir Prasad Ramsaran Lal, Thathree Bazar, Banaras (Uttar Pradesh). 78128, February 2, 1954. Syringe.
- Maqsood Ali Khan, Proprietor: Industrial Trading Co., Upper Fort, Aligarh, (U.P.) 79066, June 2, 1954. Lock; 79067, June 2, 1954. Key.
- Matharoo Engineering Works, Ferozepur Road, Ludhiana, Punjab, 79527, July 30, 1954. Chain wheel of a bicycle.
- Md. Said and Sabbir Ahmad, Proprietors, American Lock Works, Purani Kachhari Aligarh (U.P.) 79952, September 21, 1954. Lock; 79953. September 21, 1954. Key.
- Mirza Mohammed Suleman, son : Mohammed Luqman of Ahata Kedara, Sadar Bazar, Delhi 6. 79557. August 4, 1954. Pad locks.
- Mital Rolling Mills, Budh Bazar, Moradabad, (Uttar Pradesh) 78185, February 13, 1954. "Basin" (Silapchi)
- Mohamed Abdul Azeez, No. 24, Mafus Khan Garden Stred George Town, Madras 1. 77863, January 9, 1954. Pad-lock.
- Mohamed Dastgir, No. r-19 & 20, Nalbandwadi, Bangalore 2. 78369, March 3, 1954. Container made wholly of metals or in which metal predominates.
- Mohindra Engineering Works. Mandi Road. Mandir Building, Jullundur City, Punjab. 78681, April 5, 1954. Rickshaw cycle saddle.
- Morphy-Richards Limited, of Arterial Road, St. Mary Cray, Kent, England. 78418. February 2, 1954. An electrically heated iron.
- Morries Metal Industries, Atash Bazar, Aligarh, Uttar Pradesh. 77999. January 18, 1954. Pad lock.
- (Messrs.) Mrudul Metals, 4, 2nd Carpenter Street (Null Bazar), Bombay 4. 77976 to 77978, January 15, 1954. Metal Saucers.

Muthuvelappa Gaunder, trading as Than-gamani Metal Factory. Gobichellipala-yam (Coimbatore District), S. India, 79922, September 17, 1954. Spoon.

Naba Kumar Routh, 56, Clive Street, Calcutta-7. 79568, August 4, 1954. Weights for weighing (Square shape).

Nanda Lall Ghose, of 114, Makardah Road, Howrah. 79939, September 20, 1954. Metal weights.

Nasiruddin, son of Mohd Ismail, of Mohal-la Sheikh Dawood, Aligarh, U.P. 79665 and 79666, August 18, 1954. Spring lock.

Nelson and Company, No. 62 Swami Pillai Street, Choolai, Madras. 77778, December 28, 1953; 79787, August 28, 1954. Tamil type fonts.

Newton Type Foundry, 80 Wallajah Road, Mount Road, P.O. Madras 2, 78906 and 78907. May 15, 1954. Telegu Printing types.

Nihal Chand, Proprietor, Good Luck Chemical Works, Sadar Bazar, Delhi 6. 77549, November 30, 1953. Tin Box for toilet Powder.

Norton & Company, 1-16, Baker Tiruven-gada Mudali Street, Choolai, Madras 7. 80434, November 6, 1954. Type founts composed wholly of metal for purposes of printing.

Ogale Glass Works Limited, Ogalewadi, Dist. North Satara, Bombay. 78999, May 25, 1954. Stove.

Olympia Werke West G.m.b.H. of 52 Bremerstrasse, Wilhelmshaven, Germany, a German Company, 78869 (November 7, 1953), Urdu Keyboard.

Pannalal Saxena, Proprietor M/s. P. L. Brothers, Rangmahal, Aligarh (U.P.) 78053, January 25, 1954, Locks; 78245, February 19, 1954, Locks; 79669, August 18, 1954, Locks; 80065, October 8, 1954. Locks.

Patent Tiffin Carrier Sangvi Co., The, 110, Shivaji Nagar, Poona 5, Bombay. 80028, September 29, 1954. Tiffin carrier.

Pilot Pen Company (India) Ltd., The Catholic Centre, No. 2, Armenian Street, Madras 1. 77958 and 77959. January 15, 1954. "Fountain pen clips."

Popular Scale Company, The, 210, Cuttery Bazar, Bombay 3. 77882, January 12, 1954. Weighing apparatus.

Prakash Udyogalay of 196K-A Gaiwadi, Bombay 4. 79195, A Spoon; June 16, 1954. 79941, September 20, 1954. A spoon.

Raghavendranath Ramsingh, Chouhan, of Vishnunagar, Dombioti, District Thana, Bombay. 78244, February 19, 1954. Water heaters.

Reliance Industries, Indian firm, Tak Falia Gandevis, Dist. Surat. 79664, August 18, 1954. Tiffin Carrier handles. 80673 and 80674, November 22, 1954. Coffee or tea percolator; 80675, November 22, 1954. Coffee or tea percolator.

Robertson Thain Limited, of Ellesmere Port, Wirral, Cheshire, England. 78236. February 17, 1954. A ridge ventilator.

(Messrs.) Royal Manufacturing Co., Kapurthala Road, Jullunder City (East Punjab), 77860, January 7, 1954. Cycle chain cover.

Rudra & Co. Ltd., 32, Madan Mitra Lane, Calcutta 6. 80326, October 23, 1954. "Printing type faces."

South India Corporation (Madras) Ltd., No. 2, Armenian Street, Madras 1. 77574 December 3, 1953. "Kiosks."

(1) Sri Badridas Chowdhury (2) Sri Devi Dutt Chowdhury, (3) Sri Keshardeo Chowdhury and (4) Sri Binandilal Chowdhury, Shri Veswakarma Industries, 192, Cross Street, Calcutta. 77597 to 77600, December 7, 1953. Buckets.

Swadeshi Trunk Factory and Shops, (Proprietor: Mahadev Vinayak Indulkar) of Vijay Nagar, Dadar, Western Railway, Bombay 28. 79670 and 79671, August 18, 1954. A trunk.

Srish Chandra Banerjee and Uma Rani Mukherjee, both of 37C, Nazir Lane, Calcutta 23. 80327 to 80329. October 29, 1954. Goorgooris (Indian smoking accessory).

(Messrs.) Swadesi Type Foundry, Guruvappa Chetty Street, Chintadripet, Madras, Madras State, 77644, December 11, 1953. Malayalam printing types; 77980, January 15, 1954. Telegu printing types.

S. Tajbhai and Sons, P.O. Box No. 46, Para Bazar, Rajkot, Sourashtra, 79926, September 17, 1954. Tower bolts.

Sadhu Charan Auddy and Co., of 35 Nalini Sett Road, Calcutta. (Partners Sri Nanda Kumar Das and Sri Bhadreswar Auddy) 79208, June 19, 1954. Gold disc.

Sardar Puran Singh, son of Sardar Paka Singh of Industrial Area, Sahadur Garh, District Rohtak, Punjab. 79558, August 4, 1954. Oil seed crushing machines.

Santokhsingh Viridi, Proprietor, Viridi Engineering Works, Sultanwind Road, Amritsar. 79544. August 2, 1954. Wire twisted brush.

Schwanhausser & Co., K. G., also trading as Swan Pencil Co., Schwanbleistiftfabrik, Nuremberg, Germany, 78448 and 78449, March 12, 1954. Pencil sharpener.

(Sm.) Sheela Sharma, Wife of Dr. J. N. Sharma, Professor of Agriculture, Government Agricultural College, Kanpur (U.P.), 77490, November 23, 1953. "Hand hoe (it is used for hoeing crops in the field by the farmers)."

Singer Manufacturing Company, The, of Elizabeth, New Jersey, United States of America. 80508. November 13, 1954. A sewing machine.

(Messrs.) Traders United, of 107, Sir Vethaldas Chambers, 16, Apollo Street, Fort, Bombay 1. 77702, December 19, 1953. Statue; 77735, December 22, 1953. Plaque; 77752, December 26, 1953. Plaque.

V. Chhibber and Co., an Indian Partnership firm registered in Bombay (India) of 222 E, Bellasis Road, Byculla, Bombay-8. 78679. April 5, 1954. Tricycles for children; 79919. September 16, 1954. "Children's pedal toys." 79920, September 16, 1954. Children's pedal toys.

(Mrs.) Vina Mody, 1, Carmichael Road, Bombay. 78181, February 13, 1954. Chair.

Vithobasao Mahadeosao Khanorkar, Umrer, Tahsil, Umrer District Nagpur, 77340, October 29, 1953. Gold Sikkas or coins.

Vummiadiars (MFRS) Ltd., 162, Mount Road, Madras 2, India. 77594, December 7, 1953. Service toy; 77730, December 2, 1953. Oval dekshi.

W. Smith & Co., of Aligarh, (Uttar Pradesh) 78359, March 1, 1954. Pad-lock.

Walter Bonson and William Bonson, both of Hale Field, Queen's Road, Hale, Cheshire, England, 78998, May 25, 1954. "A horse shoe".

Yashpall Chopra S/o. L. Kashmirilal of Mahalla Mahian, Ludhiana, Punjab State, trading as Yash Mechanical Co., (Regd.) 79350, July 3, 1954. Bobbin case spring of sewing machine.

Zahoor Mohammad, son of Faiz Mohamad, Friend and Co., Opposite Chauki Sarai, Shaheed Ganj, Saharanpur, Uttar Pradesh. 79556, August 4, 1954. Pitcher pump made of iron.

CLASS 2.—Books and bookbinding of all materials.

NIL.

CLASS 3.—Articles composed wholly of India-rubber, wood, bone ivory, papier mache, celluloid bakelite, or like substances or of materials in which such substances predominate (except articles included in Class 10).

Abul Khare S/o. Sri Asgar Ali, 94/1, Ashraf Building, Nai Sarak, Kanpur (Uttar Pradesh). 79467, July 23, 1954. Upper surface of the soles of a pair of chhapals. 79468, July 23, 1954. Straps of a pair of chhapals.

Artbangle Ltd., National Insurance Building, 204, Hornby Road, Fort, Bombay. 78842, May 3, 1954. Spectacle frame; 78932, May 20, 1954. Frames for spectacle; 79479, July 23, 1954. Frames for spectacles.

Bhupender Singh, Proprietor of B. B. Plastic Industries., 13, Race Course Road, Amritsar. 79173 and 79174. June 12, 1954. Plastic shuttle-cock; 79175, June 12, 1954. Plastic ball.

Bright Brothers Ltd., of 156A, Tardeo Road Bombay 7. 78001, January 18, 1954. Egg beater; 78076, January 28, 1954. Holder of book mateles; 78188, February 15, 1954. Youlk Strainers; 78399, March 6, 1955. Containers; 78798, April 23, 1954. Tumbler tray *cum* lit; 79095, June 7, 1954. Table calendar *cum* pencil rest; 79223, June 21, 1954. Road makers.

Chandulal Tribhovandas Patira, C/o. Jai Hind Leather Products, 128, Broadway, Madras 1. 77443. November 17, 1953. Purses and pouches.

Chunilal Jagjivan Panchal, C/o. Prakash Metal Works, 5D, 2nd Dubash Lane, Vithalbhai Patel Road, Bombay 4, 76831, September 16, 1953. Calendars (Manufactured out of plastic).

Dhanraj, Address: 3, Moti Bagh Ahmednagar Camp (Deccan), 77474, November, 19, 1953. Set Square.

(Messrs.) Dot Pens Limited, of 101, Park Street, Calcutta. 77613 and 77614. December 9, 1953. Ball point pen.

Dunlop Rubber Company Ltd., of Fort Dunlop, Erdington, Birmingham, England. 77557 (September 10, 1953.) A tyre for a vehicle wheel; 77874 (September 15, 1953.) A tyre for a vehicle wheel; 77875 (October 1, 1953.) A tyre

- for a vehicle wheel; 78138 (October 7, 1953.) A tyre for a vehicle wheel; 78139 (November 7, 1953.) A tyre for a vehicle wheel; 79098, (March 5, 1954.) A tyre for a vehicle wheel; 79506 (February 25, 1954.) A tyre for a vehicle wheel; 79507 (March 4, 1954.) A tyre for a vehicle wheel; 79508. (March 23, 1954.) A tyre for a vehicle wheel; 79802, (June 16, 1954.) A tyre for a vehicle wheel; 79879 (July 2, 1954.) A tyre for a vehicle wheel; 80004, (July 22, 1954.) A tyre for a vehicle wheel.
- (Messrs.) Elora Art Industries, 18/2, Phophal Wadi, Bhuleshwar, Bombay. 78182 to 78184. February 13, 1954. Fluorescent light holder.
- Ercole Marelli & Co., Societa per Azioni of Corso Venezia 16, Milan, Italy. 77352 October 30, 1953. A table-cum-wall fan.
- Ernst Rosner, 55, Gariahat Road, Calcutta-19, 78471. March 15, 1954. Casings for electric bells, Buzzers and like apparatus.
- Excel Industries, Ghodbunder Road, Jogeshwari, Bombay. 79921. September 16, 1954. Bangles.
- Firestone Tire and Rubber Company, of Canada Limited, Beach Road, Hamilton, Province of Ontario, Dominion of Canada 77692. (November 31, 1953.) A tire.
- Garware Finance Corporation Limited, Chaupatty Chambers, Sandhurst Bridge, Chaupatty, Bombay 7. 79300 and 79305. June 29, 1954. Tooth brush handle; 79301 and 79303, June 20, 1954. Tooth brush container; 79302, June 29, 1954. Bottles made of thermoplastic; 79354. July 5, 1954. Shaving brush handle; 80447. November 8, 1954. Feeding bottle.
- Haji Abdulla Ahmed, trading as Arabia Trading Company, Baghdadi Manzil, Khaudia Street, Bombay 8. 77534. November 28, 1953. Folding chair.
- Harbans Lal Malhotra & Sons Ltd., of 18, Netaji Subhas Road, Calcutta. 80000. September 27, 1954. Shaving brushes.
- Harjit Singh Khanna, of 116, Chittaranjan Avenue, Calcutta-7. 78897 to 78900. May 15, 1954, Hair clips; 79413, July 15, 1954. Hair clips; 79881, Clips (Hair).
- (Messrs.) Hind Plastic Works Ltd., 16, Pageyapatty Street, Calcutta-7. 78804. April 24, 1954. Cigarette holders.
- India Tyre and Rubber Company Limited, of Inchinnan, Renfresshire, Scotland. 79185, June 14, 1954. A tyre for a vehicle wheel.
- Kamakhyia Charan Sen, of 25/A, Christopher Road, Calcutta-14. 77779 and 77780. December 28, 1953, Toys; 79159 to 79164. June 11, 1954. Rubber (Latex) toys.
- (Messrs.) Kersons Manufacturing Company of India Limited, Gopal Nivas, Lohar Chawl, Bombay-2. 78754. April 17, 1954. Electric switches.
- Koh-I-Noor Nylon Limited, The, an Indian Company of Kohinoor Buildings, University Road, Banaras 5, India. 79061. June 1, 1954. "Container for tooth brush"; 79110. June 8, 1954. Carve clinograph.
- Kosmek Limited, P.B. No. 1680, General Assurance Building, 232, Hornby Road, Bombay-1. 78191 to 78193. February 15, 1954. Hollow ware, bottles, jars and other containers made of polythene and other plastic material; 78557 to 78565, March 26, 1954. Hollow ware and bottles made of polythene and other plastic material; 79042. May 31, 1954. Stoppers made of polythene and other thermoplastic material; 79043. May 31, 1954. Pourer cum stopper made of polythene and other thermoplastic material.
- Lakhany, of 29-A, Sea Castle, opposite Tilak Statue, Chawpatty Sea Face, Chawpatty, Bombay-7. 79788. August 30, 1954. Smoker's set.
- Leslie Woolcott, of 51, Sidbury Worcester, Worcestershire, England. 79551. August 2, 1954. A bed capable of use as a table.
- Mabie Todd & Co., Limited, of 67, Brook Street, London, W.I., England. 79365. July 6, 1954. Fountain pen.
- Mahabir Plastic Industries, of 6, Canal Road, Tollygunj, Calcutta-33. 77957. January 13, 1954. Plastic battery separator plate.
- Mohamed Dastgir, No. R-19620 Nalbandwadi, Bangalore-2. 78370. March 3, 1954. Containers.
- Munshi Lall Mistry, Vishkarma, Road No. 6-D, Gardanibagh G.P.O., Patna. 78194. February 15, 1954. Folding boat.
- Olympia Werke West G.m.b.H. of 52 Bremerstrasse, Wilhelmshaven, Germany. 78870. (November 7, 1953) Urdu Keyboard.
- Om Prakash, C/o. Beharilal Thara Sahib, Amritsar. 80294. October 20, 1954. Plastic Bangle.
- Paramraj Dewanchand Chabbra, of 3, Mherwan Building, Sir Phirozshah Mehta Road, Bombay-1. 77550. November 30, 1953. Soap tray cum tooth paste tube cum tooth brush holder.

- (Messrs) Pearl & Plastic Products, Dubash Building, Charni Road, Tram Junction, Bombay-7. 78672. April 5, 1954. Diary cover.
- Prest-O-Lite, 104, Ghod Bunder Road, Santa-Cruz, Bombay 23, 77475, November 20, 1953. Plastic toy; 77727. December 21, 1953. Toys.
- Reliance Trading Company, Station Road, Jamnagar, Saurashtra. 79718, August 26, 1954. Lead Pencils.
- S. T. Sons & Co., 4th floor, Dada Manzil 67-69, Mohd. Ali Road, Bombay 3. 78167. February 10, 1954. Hair clips; 80064. October 8, 1954. Clips.
- Schwanhauser & Co., K. G. also trading as Swan Pencil Co., Schwan-Bleistift-Fabrik, Nuremberg, Germany, a German Co., 78450, March 12, 1954. 78625, March 29, 1954. 78780 and 78781. April 20, 1954. "Pencils."
- South India Corporation (Madras) Ltd., No. 2, Armenian Street, Madras 1, 77575 December 3, 1953. Kiosks.
- Sulakhan Singh Suchdev, Prop. Messrs Veena Perfumery Co., Fatehpuri, Delhi-6. 76984, September 28, 1953. Cap of glass phial.
- (Messrs.) Swadeshi Type foundry of No. 51 Guruvappa Chetty Street; Chintadripet, Madras. 77643, December 11, 1953. Malayalam printing type; 77981, January 15, 1954. Telugu printing type.
- T. Maneklal Mfg. Co. Ltd., of Examiner Press Building, Dalal Street, Fort, Bombay-1. 78702. April 6, 1954. Containers.
- Telefonaktiebolaget L M Ericsson, of Stockholm 32, Sweden. 79086 to 79089, June 4, 1954, Ear portion of a Telephone. Standset; 79090 to 79092, June 4, 1954. Stand base of a telephone standset.
- Temina Khurshedji Karanjia, of Quetta Terrace, Chowpathy, Bombay-7. 78647, April 1, 1954. A device for weighing letters and the like.
- (Messrs.) Traders United, 107, Sir Vethaldas Chambers, 16, Apollo Street, Fort, Bombay. 77704, December 19, 1953. Plaque; 77736, December 22, 1953. Plaque; 77753 and 77757, December 26, 1953. Plaque.
- William Richard Maurice Mitchell, of 88 Tennant Street, Birmingham 15, England 78926. May 18, 1954. "Wall or like brackets primarily intended for supporting brooms, tools or similar instruments".
- (Messrs.) V. Chhibber & Co., of 222/E, Bellasis Road, Byculla, Bombay-8. 78680. April 5, 1954. Tri-cycles.
- CLASS 4.**—Articles composed wholly of glass, earthenware, or porcelain, clay (burnt or baked), or cement or in which such materials predominate.
- Alembic Chemical Works Co., Ltd., Baroda-3. 77693. December 17, 1953. Glass bottles.
- Anglo Indian Drug & Chemical Coy, 285, Juma Masjid, Bombay 2. 78840, May 1, 1954. Glass bottle; 79869. September 10, 1954. Glass bottle.
- Ashok Glass Works, of 5 Lucas Lane, Calcutta. 77476, November 21, 1953. Glass Tumblers; 77621, December 10, 1953. Jars; 77838 and 77839, January 5, 1954. Glass bowl; 77876, January 11, 1954. Glass jar; 78101, February 1, 1954. Bowls; 78329 and 78330. February 25, 1954; Glass Jars; 78477. March 16, 1954. Glass tumblers; 78555 and 78556, March 25, 1954. Glass tumblers; 78626, March 29, 1954. Bowls; 78641. March 31, 1954, Goblet; 78642, March 31, 1954. Tumbler; 78784, April 20, 1954. Glass tumblers; 78834 and 78835. April 28, 1954. Glass tumblers; 78838 and 78839. May 1, 1954. Glass tumblers; 78930 and 78931, May 20, 1954. Glass tumblers; 79062 and 79063. June 1, 1954. Glass tumblers; 79207, June 18, 1954, 79371 to 79374. July 9, 1954. Glass tumblers; 79378 and 79379, July 10, 1954. Glass tumblers; 79846 and 79847. September 6, 1954. Glass tumblers.
- B. P. Benzin—Und Petroleum-Gesellschaft Mit Beschränkter Haftung, of Steinstrasse 5, Hamburg-1. Germany. 80404 May 13, 1954. Canopy.
- Biswa Nath Shukla, Proprietor, Biswa Nath Shukla & Sons, Hodlaganj, Kanpur. 76521 to 76525. August 13, 1953. Bottles.
- Calcutta Chemical Co. Ltd., The, 35, Panditia Road, Calcutta-29. 78164, February 10, 1954. Glass phials; 78328, February 25, 1954. Glass phials; 78569. March 26, 1954. Glass Phials.
- Camlin Limited, Rambag, Lady Jamshedji Road, Bombay 16. 79209. June 19, 1954. Ink bottles.
- Commonwealth Trust Limited, The, of Kozhikode 1, Malabar; 77691. December 16, 1953. Roofing tiles.
- Enarpee Products (India) Inc. 9 Chhoti Gual Tolly, Indore (M.B.) 79180 and 79181. June 14, 1954. Ink bottles.

- Erasmic Company Limited, of Unilever House, Black Friars, London, E.C. 4, England. 78837. May 1, 1954. Bottles.
- Farrok Khudanurad Irani, "Bloomfield," Nazarbad, Mysore. 80367, October 29, 1954. Containers.
- Gazi Mohd. Sadiq Ali S/o. Amjad Ali Khan, Sohbatia Bagh, Raja Bazar, Lucknow, U.P. 78130 to 78132, February 2, 1954. Imitation glass diamond 79470, July 23, 1954. Imitation diamond.
- Godrej Soaps Limited, Delisle Road, Bombay. 79890. September 11, 1954. A bottle.
- Goya Limited, of 161, New Bond Street, London W., England. 77731. December 21, 1953. A bottle of phial.
- Hamdard Dawakhana, Hamdard Building, P.O. Hamdard, Lal Kaun, Delhi 6. 77592 and 77593. December 7, 1953. Glass phial.
- John Leo Mulvaney, Bombay Mutual Building, Hornby Road, Bombay. 77770, December 28, 1953. Tiles.
- (Sm.) Kamal Kumari Mazumder, 4/70, Chanditolla Lane, Tollygunge, Calcutta-40. 79861 and 79862. September 8, 1954. Bottles made of glass.
- Khurshid Alam, Aftab Alam, S/o. Mohammad Ismail, Babu Bhai and Shahab Uddin, Indian Subjects, Sukhan Khan, trading as Asian Bangles Supply Co., 106, Mohammedpur Street, Firozabad, Uttar Pradesh. 79112, June 9, 1954. Glass bangles.
- Krishan Lall Varma, C/o. Messrs. K. L. Varma & Sons, Gandhi Road, Dehra Dun, U.P. 79577 to 79580. August 6, 1954. Latrine; 79632 to 79634. August 16, 1954. Water closet; 79728 to 79731. August 27, 1954. Water closet.
- (Shri) Lalchand, Son of Kevalram, Gosymer, 8D, Sitladevi Temple Road, Mohim, Bombay 16. 78969. May 24, 1954. Glass bottles.
- Madura Company Limited, Kozhikode-1, Madras. 78250 February 19, 1954. Roofing tiles.
- Malabar Tile Works, The, of Feroke, Malabar, South India. 80010. September 29, 1954. Roofing tiles.
- Malik Chand Sawhney, Trading as The Crown Manufacturing House, 19, Model Basti, Post Box No. 2555, New Delhi-5. 78190. February 15, 1954. Ink bottles.
- Metro Perfumery Co., Mori Gate, 8, Haji Building, Delhi-6. 80454. November 8, 1954. Jar with its cover.
- (Messrs.) Mohan and Suresh Company, of Agra Road, Ghatkopar, Bombay State. 77745. December 13, 1953. Packing paper.
- Pilot Pen Company (India) Ltd., Catholic Centre, No. 2, Armenian Street, Madras-1. 77960. January 15, 1954. Ink bottles.
- Ramella Sambasiva Row, Sole proprietor of National Products Syndicate, 141, Govindappa Naick Street, G. T., Madras. 79439. July 20, 1954. Ink bottles.
- Smith, Stanistret and Company Limited, 18, Convent Road, Calcutta-14, India. 79972. September 23, 1954. A bottle.
- South India Corporation (Madras) Ltd., No. 2, Armenian Street, Madras 1, India. 77576. December 3, 1953. Kiosks.
- Srish Chandra Banerjee and Uma Rani Mukherjee, both of 37C, Nazi Lane, Calcutta-23. 80373 to 80375. October 29, 1954. Goorgooris (Indian smoking accessory).
- Swastik Agency, The, 165, Govindappa, Naick Street, Madras 1. 78424. March 10, 1954. Glass bottles; 79306. June 29, 1954. Glass bottles.
- Technicolour Glass Marble Mfg. Company of New Building, 404-AA, Kalbadevi, Bombay 2. 79984. September 27, 1954. Glass tumblers.
- (Messrs.) Traders United, 107, Sir Vithaldas Chambers, 16, Apollo Street, Fort, Bombay. 77703. December 19, 1953. Statue; 77737. December 22, 1953. Plaque; 77754 and 77758. December 26, 1953. Plaque;
- (Messrs.) Victory Fruit Products, Lentin's Bungalow, Katrak Road, Dadar, Bombay. 78779. April 20, 1954. Bottles.
- William Melor, of Athol, 15, Woodland Avenue, Burslem, Stoke-on-Trent Staffordshire, England and Samuel Slade of 28 Bishop Road, Chell Heath, Stoke-on-Trent, Staffordshire, England. 79324. (January 13, 1954). A memorial vase.
- CLASS 5.**—Articles composed wholly of paper, card-board, mill-board or straw-board (except articles included in Class 2, and paper hangings), or in which such materials predominate.
- (Messrs.) Achhelal Sheel Chand Jain, Gosaipura, Jhansi, (Uttar Pradesh), 78186. February 13, 1954. Label.
- Agarwal Chemical Works, 31/28, Beldari Mohal, Kanpur, Uttar Pradesh. 80532. November 16, 1954. Carton.

- Ajeet & Co. Perfumers, Sadar Bazar, Delhi 6, 79709. August 23, 1954. A carton.**
- Allisan Alagusundaravel Karaiyalar Ari-
chanatham P.O., Sattur Taluk, (Via)
Virudhunagar, Ramnad District, Mad-
ras. 79586. August 6, 1954. Labels.**
- Arumuga Nadar Shanmugavel Nadar
Amritham, Amritha Vilas, Kailash-
puram, Tinnevely Jn., Tinnevely Dt.,
S. India. 78098. February 1, 1954.
Label.**
- Arunachala Nadar Karuppiyah Nadar, (ii)
Arunachala Nadar Ramaswami Naddar,
and (iii) Chidambara Naddar Shunmu-
gam, trading as Iyyanar Cofee and Tea
Co., 146, Ettayapuram Road, Tulicorin
(Tinnevely Dt.) S. India. 79923.
September 17, 1954. Label.**
- Arunagiri Nadar Sankaralinga Nadar
Guruswami Nadar, Proprietor of Mohan
Snuff Co., Washermenpet, Madras-21,
(South India) 78409 and 78410. March
8, 1954. "Label."**
- Associated Imports & Exports Co. Ltd.,
P-6, Mission Row Extension, Calcutta-1.
79826. September 2, 1954. Cartons.
(Messrs.) Babu Bidi Company, Saugar
(Madhya Pradesh) 78133. February 2,
1954. Label.**
- Beggaram Vinkatapathiah Sri Ramaiah,
Proprietor, B.V. Aswathaiah and Bros.,
Nagarthapet, Bangalore City (Mysore
State). 79489. July 26, 1954. Labels.**
- Beni Madhab Bhattacharjee, 48, Sitaram
Ghosh Street, Calcutta-9. 79367. July
8, 1954. Label.**
- Dr. Boganadham Rajah Narasimhalu
Chetty, 89, Sunthapet, Gudiyattam, N A.
Dist., Madras. 80150, October 14, 1954.
Label.**
- Chandra Sen Jain & Company, Chirgaon
(Dist. Jhansi) (Uttar Pradesh). 78254.
February 22, 1954. Label.**
- D C. Nagappa Chetty and Brother, Pro-
prietors of the Eswaran Match Works,
Gudiyattam, North Arcot District, Mad-
ras Province, 77554. December 2, 1953.
Labels.**
- Dilbahar Zarda Factory, Saadat Gunj
Lucknow (Uttar Pradesh) 79093. June
5, 1954. Labels.**
- Eagle Chemical Industries (India), 53,
Rajendra Nagar, New Delhi. 78741 and
78742. April 15, 1954. Cartons or
boxes for hair dye.**
- Eagle Playing Card Manufacturing Com-
pany, Lal Kuan, Delhi, 78315 to 78321.
February 25, 1954. Playing Cards;
78392 to 78395. March 5, 1954. Cartons
or boxes for playing cards; 78400 to
78403. March 6, 1954. Playing cards;
78483 to 78494. March 17, 1954. Play-
ing cards; 78525 and 78526. March 22,
1954. Carton for playing cards.**
- Enarpee Products (India) Inc. 9 Chnoli
Gwal Tolly, Indore, M.B. 79999. Septem-
ber 27, 1954. Cartons.
(Messrs.) Essgee Thread Mills, of Saddar
Bazar, Delhi. 78644. April 1, 1954.
Wrappers made of paper for packing
articles.**
- Gurucharan Singh & Bros., Bazar Kathian-
wala, Amritsar. 79325. July 2, 1954.
Labels; 79430. July 19, 1954. Labels.**
- Gurmikhsingh & Sons, Chouk Prag Dass,
Amritsar. 80295. October 20, 1954.
Label.**
- Harbans Singh, Proprietor Parbhat Gene-
ral Stores, Bazar Kathianwala, Amrit-
sar. 78736. April 15, 1954. Label;
79346. July 3, 1954. Labels.**
- Harcharan Singh Proprietor, Jaswant Oil
and Cotton Mills, Kot Mit Singh, G. T.
Road, Amritsar. 79530. July 30, 1954.
Labels.**
- Harjit Singh Khanna, of 116, Chittaranjan
Avenue, Calcutta. 78551 to 78554.
March 25, 1954. Cards.**
- Jagannath Prasad Nankahu Prasad. Pitra
Kunda, Banares (Uttar Pradesh). 77661
to 77665. December 15, 1953. Label.**
- Jayant Paper Box Factory, Borbhat Lane,
Girgaum, Bombay-4. 78593. March 29,
1954. Wrapping or packing paper for
Card-board boxes; 78673. April 5,
1954. Card-board boxes.**
- Kasturi Lal Kantore, Mohalla Sethian
Wala, Purana Bazar, Ferozepore city,
Punjab. 78313. February 24, 1954.
Labels; 78314. February 24, 1954.
Carton.**
- Khasim Beedi Factory, Chickpet, Dodda-
balapur (Mysore State). 77333 and
77334. October 28, 1953. Labels.**
- Kunwar Lal Nemi Chand Jain, Katra
Road, Jhansi (Uttar Pradesh). 79014.
May 28, 1954. Labels.**
- Kuppanda Muthuvelappa Gounder, Trad-
ing as Thangamani Tobacco Co., Pudup-
palayam Govichettipalayam, Coimbatore
Dt. (South India) 79001. May 26, 1954.
Label.**
- Lakshmi Paint Works, 14-2, Old China
Bazar Street, Calcutta-1. 79983. Sep-
tember 27, 1954. Labels.**

- Dr. Lalchand Gambhir, Managing Director, Gambhir Chemical and Pharmaceutical Works Ltd., Sheshdripuram, Bangalore-3. 79629. August 16, 1954. Envelopes.
- Lightning Fasteners Limited, of Imperial Chemical House, Millbank, London, S.W.1, England, 77913. January 12, 1954. A blank for a carton for zip fasteners.
- Lucky Paper Mart, 54, Sutar Chawl, Bombay-2. 78163. February 10, 1954. Carton; 78381. March 4, 1954. Label; 78498. March 18, 1954. Card-board boxes.
- Makkunni Pachai Sankaralinga Rathinasamy Nadar, Mukkunni Pachai Sankaralinga Nataraja Nadar and Makkunni Pachai Sankaralinga Balakrishna Nadar and Mukkunni Pachai Sankaralinga Manicka Nadar, trading as Balakrishna Industrial Works, No. 5, Somu Chelly Street, 3rd Lane, Madras-13. S. India, 79435. July 19, 1954. Carton.
- Mathuram Beniram Ltd., Post Box No. 11, Banaras (Uttar Pradesh). 78937 to 78939. May 22, 1954. Label;
- Metro Perfumery Co., Mori Gate, 8 Haji Building, Delhi-6. 80175. October 15, 1954. Carton; 80176. October 15, 1954. Label.
- (Messrs.) Mitharam Jasharam, 11-13, Shamsheet Street, Chippi Chawl, Bombay-2. 77586. December 2, 1953. Playing cards.
- (Messrs.) Modern Water-Proof Papers Mfg. Co., 109, Masjid Bunder Road, Gaya Building, 4th Floor, Bombay-3. 77360. November 4, 1953. Waterproof papers.
- Mohamed Dastgir, No. R-19 & 20. Nalbandwadi, Bangalore-2. 77873. January 11, 1954. "Container made of cardboard, mill-board, straw-board, paper or in which such materials predominate"
- Mohanlal Piyaralal, Perfumers, Gandhi Market, Sadar Bazar, Delhi-6. 80334. October 27, 1954. A label.
- Mysorewalla Dhoop Factory, Katra, Hussain Bux Khari Baoli, Delhi-6. 78876. May 8, 1954. Paper.
- Nandooram Khedan Lal, Ghet Gunj, Banaras (Uttar Pradesh), 77666 and 77669. December 15, 1953. Labels.
- Narang Udyog Bharat, 32/81, Bagiya Mani Ram, Kanpur. (Uttar Pradesh). 77578. December 3, 1953. Label.
- Narayana Tharmaputhira Thanukkodi Ganapathi Chettiar known as N.T.T. Ganapathi Chettiar, Proprietor, Sri Ganapathi Rice & Oil Mills, Main Road, Kovilpatty, Tirunelveli District (Madras State). 79844. September 4, 1954. Label.
- National Lithographic and Printing Press, Agarpara, 24 Parganas. 79005 and 79006. May 27, 1954. Cartons for Playing cards.
- Navnitlal Manilal Shah, C/o. Comteck Laboratories, P.B. No. 2762, 12, Champa Street, Bombay 2. 78252. February 20, 1954. Cartons.
- Nikhil Chandra Roy of 5/B, Bhabani Dutt Lane, Calcutta-7. 77916. January 12, 1954. Labels.
- Nomanbhai Lookmanji, Abbasbhai Lookmanji, Hashimbhai Lookmanji, Hatimbhai Lookmanji and Sirajbhai Lookmanji, 42A, Vakola Pipe Lane, Santa Cruz. 79285 and 79286. June 28, 1954. Playing cards; 80133 to 80143. October 14, 1954. Playing cards.
- Ogale Glass Works Limited. Ogaiwadi, Dist. North Satara, Bombay State, 79000. May 25, 1954. A label;
- (Messrs) Parry and Co., Ltd., "Dare House", Madras-1. 76569. August 19, 1953. Label.
- R. C. & Company, Bara Gaon Gate, Jhansi (U.P.), 78253. February 22, 1954. Labels; 79015, May 28, 1954. Labels.
- R. M. Bidi Company, Jhansi (Uttar Pradesh) 78744 and 78745. April 15, 1954. Label.
- Ram Chand Mohanlal, of 53, Khangraputty Street, Calcutta. 77537 and 77538. November 30, 1953. Label; 77555. December 2, 1953. Label; 79369. July 9, 1954. Labels; 79888. September 14, 1954. Label; 79940. September 20, 1954. Labels.
- Ram Saran Khandelwal, Chowk, Kanpur, Uttar Pradesh. 78729. April 12, 1954. Label; 78796. and 78797. April 23, 1954. Labels.
- Ram Singh, Proprietor Ajit Thread Ball Co., Bazar Kathianwala, Amritsar. 78339. June 15, 1954. Label.
- Ramdas Sobhraj, 283, Janjekar St., Bombay-2. 79783 to 79785. August 28, 1954. Playing cards; 79912 to 79917. September 15, 1954. Playing cards; 80048. October 8, 1954. Playing cards; 80049. October 8, 1954. A joker of playing cards.

(Messrs.) Sardar Bidi Company, Raghu-
garh, Dist., Guna (M. B.), 78824. April
27, 1954. Label.

Sattar Khan, Proprietor, Subhas Beedi
Factory, Channanpatna (Mysore State).
77619. December 10, 1953. Labels.

Sham Sunder, Partner, of Firm Bhagwan
Dass Sham Sunder, Thana Shahib,
Amritsar. 79441. July 20, 1954. Label.

Sharda Paper-Box Mfg. Co., 100, Byculla
Station Road, Bombay-11. 78596 to
78610. March 29, 1954. "Playing cards"
79789 to 79791. August 30, 1954. Play-
ing cards.

Shiv Soap Works, New Ganesh Gunj,
Lucknow (Uttar Pradesh) 79995. Sep-
tember 27, 1954. Label.

South India Corporation (Madras) Ltd.,
No. 2, Armenian Street, Madras-1, India.
77573. December 3, 1953. Kiosks.

Sri Ram Textile Factory, 32A, Joy Mitter
Street, Calcutta-5. 78505 and 78506.
March 20, 1954. Labels.

Southern India Match Company, Gudiyat-
tam (South India) 77096. October 6,
1953. Labels.

Subbiyya Somasundaram Vellaiyya
Govindasamy Pillai, Pudu Road, Naga-
pattinam (Tanjore District, South India)
78445. March 12, 1954. Label; 78785
April 21, 1954. Label.

Sukkur Biscuits Mfg. Co., 86, Factory
Area, Fazal Gunj, Kanpur, (Uttar Pra-
desh) 78134. February 2, 1954. Label.

Surindar & Brothers, Bazar Kathian,
Amritsar. 80066 and 80067. October 8,
1954. Thread tubes.

Srinivas Soap Factory, Old Tharagupet,
Bangalore City. 80069 and 80070. Octo-
ber 8, 1954. Labels.

Standard Industries, The, Vaniyambadi
(South India) 79490. July 26, 1954.
Labels.

(Messrs) Traders United, 107, Sir Vithal-
das Chambers, 16, Apollo Street, Fort,
Bombay-1. 77705. December 19, 1953.
Greeting Cards; 77738 December 22,
1953. Greeting cards, invitation cards,
etc.; 77755 and 77759. December 26,
1953. Calenders, Greeting cards, adver-
tising folders, etc.

Vellore Abdul Kareem, Proprietor, V.
Abdul Kareem Beedi Factory, Robert-
sonpet (K.G.F.). Mysore State. 78570.
March 26, 1954. Labels.

Vijayanagar Krishnaiah Mohanraj, Pro-
prietor, Monmohan Tobacco Company,
Post Box No. 215, Bangalore city, 77817.
January 2, 1954. Labels.

Weldon Sales Corporation, Pratap Build-
ing, Original Road, Pahargunj, New
Delhi. 77620. December 10, 1953. A
carton;

CLASS 6.—Articles composed wholly of
leather or in which leather
predominates, not included in
other classes.

Chandulal Tribhovandas Patira, C/o. Jai
Hind Leather Products, 128, Broadway,
Madras-1. 77444. November 17, 1953.
Purses and pouches.

Mohindra Engineering Works, Mandir
Building, Mandi Road, Jullunder City,
Punjab State. 78734. April 13, 1954.
Cycle saddle cover.

Zephyr Leather Works, Sethna Building,
Kitchen Garden Lane, Bombay-2.
77762. December 28, 1953. Folding suit
case.

CLASS 7.—Paper hangings.
NIL.

CLASS 8.—Carpets, rugs and floor cover-
ings in all materials.
NIL.

CLASS 9.—Lace.
NIL.

CLASS 10.—Boots, shoes and the like foot-
ware.

Bata Shoe Company Limited, of 30,
Theatre Road, Calcutta. 78800. April
23, 1954. Footwear.

CLASS 11.—Millinery and wearing ap-
parel (except articles included in Class
10).

(Mrs.) Katherine Dolly Smith of Terrace
Flat, Amarchand Building, Mayo Road,
Bombay. 79431. July 19, 1954. "Bras-
sieres or breast supports."

Messrs. Kay Dee Corporation, 250/B,
Worli Road, Worli, Bombay-18. 76426.
July 28, 1953. Wearing apparel (Bush
Shirt); 76427. July 28, 1953. Wearing
apparel (Sport shorts); 76428 and
76429. July 28, 1953. Wearing apparel
(Polo Jerkin); 76430. July 28, 1953.
Garments (Pullover-cum-shirt).

CLASS 12.—Goods not included in other
classes.

Chandulal Tribhovandas Patira, C/o. Jai
Hind Leather Products, 128, Broadway,
Madras-1. 77442. November 17, 1953.
Purses and pouches.

Edward Casie Chitty of 55, Mayfield Road, Colombo 13, (Ceylon) 79017. May 28, 1954. Sweet Lazenge.

Govindaswami Pillai, Sundaram Pillai, Proprietor, South Indian Soap Works, No. 2384, Ellaimmankoil Street, Tanjore, South India. 77853. January 7, 1954. Soap cakes.

Lord's Bakery Confectionery and Biscuits Company, of 2, Prince Golam Mahammad Shah Road, Calcutta-33. 79172. June 11, 1954. Biscuits.

Motia Khan Co-operative Industrial Society Limited, The, Mondhey Walam Road, Motia Khan, Delhi. 79663. August 17, 1954. Sunlight protector made of cane.

Osmond Joseph Currie, 16, Lower Range, Park Circus, Calcutta-17. 77007. October 1, 1953. Attachment for typewriters.

Renown Biscuit Company, The, of Contractor Building, Connaught Road, Byculla, Bombay-27. 77498. November 25, 1953. Biscuits.

South India Corporation (Madras) Ltd., No. 2, Armenian Street, Madras-1, India. 77572. December 3, 1953. Kiosks.

Tara Singh Juneja, Juneja Soap Factory, Dhan Mohalla, House No. E. D. 214, Jullunder city, 79500, July 26, 1954. Soap.

Tapabrata Ray Mahasay, of 13, Hindusthan Road, Calcutta-25. 78013. January 19, 1954. Musical Instrument.

CLASS 13.—Printed or woven designs on textile goods (other than checks or stripes).

(Messrs.) Abdul Kadar Husseinally Vasi & Co., 165-167, Nagdevi Street, Vasi Building, Bombay-3. 78726. April 12, 1954.

(Messrs.) Ahmedabad Kaiser-I-Hind Mills Co., Ltd., The, Outside Raipur Gate, Ahmedabad. 78246. February 19, 1954; 78173 and 78174. February 11, 1954; 78247. February 19, 1954.

Ahmedabad Manufacturing & Calico Printing Co., Ltd., The, (The Calico Mills) P.O. Box 12, Ahmedabad, Bombay. 79483, July 23, 1954; 79429. July 17, 1954; 79792. August 30, 1954; 80005. September 28, 1954; 80114. October 14, 1954; 80177 and 80178. October 15, 1954; 80468. November 9, 1954.

Ahmedabad Sarangpur Mills Company Limited, The, Outside Raipur Gate, Ahmedabad No. 1. 79206. June 18, 1954.

(Messrs.) Ajit Mills Limited, The Rakhial Road Railwayout Post, Ahmedabad 2, 78161. February 9, 1954; 78172. February 11, 1954; 78195 to 78197. February 15, 1954; 80128 to 80131. October 13, 1954.

(Messrs.) Arabian Dyeing & Printing Works, Pitambar Wadi, Mahim, Bombay-16. 77979. January 15, 1954.

Aruna Mills Ltd., The, Naroda Road, Post Box No. 57, Ahmedabad. 77585. December 4, 1953; 78295. February 22, 1954.

Arvind Mills Ltd., The, Naroda Road, Post Box 36, Ahmedabad. 77452 and 77453. November 19, 1953; 78014 and 78015. January 21, 1954; 78238. February 18, 1954; 78411 and 78412. March 8, 1954; 78544 and 78545. March 25, 1954; 78690. April 5, 1954; 78933. May 21, 1954; 79165 and 79166, June 11, 1954; 79269, June 26, 1954; 79400 and 79401, July 13, 1954; 79517, July 29, 1954; 79621 and 79622, August 12, 1954; 79944, September 20, 1954; 79963, September 23, 1954; 80299, October 18, 1954; 80511 and 80512. November 15, 1954; 80601, November 18, 1954; 80671, November 22, 1954.

(Messrs.) Asarwa Mills Limited, Asarwa Post Office, Ahmedabad 11, 77807, December 30, 1953; 79863 to 79865, September 10, 1954; 79518 and 79526, July 29, 1954.

Ashok Silk Mills, 144, Dharavi Road, Bombay 17. 78148, February 5, 1954; 78352, March 1, 1954; 78507, March 20, 1954; 78543, March 24, 1954; 79113, 79115 to 79120, June 10, 1954; 79446, July 21, 1954; 79566 and 79567, August 4, 1954; 79593, August 7, 1954; 79715, August 24, 1954; 79959 to 79961, September 22, 1954; 79996, September 27, 1954; 80044 to 80046. October 1, 1954; 80052 and 80053, October 8, 1954; 80379 to 80382, November 1, 1954; 80439, November 6, 1954; 80569 and 80570, November 17, 1954.

Asoka Mills Limited, The, Naroda Road, Post Box No. 1050, Ahmedabad-2, 78022 to 78025, January 25, 1954; 79121 to 79125, June 10, 1954; 79475, July 23, 1954; 79831 and 79832, September 3, 1954; 80060, October 8, 1954.

(Messrs.) Bechardas Spinning and Weaving Mills Co. Ltd., The, Raikhad, Ahmedabad 1, 77450, November 18, 1953; 77551, November 30, 1953; 77790, November 29, 1953; 78228, February 16, 1954; 78234, February 17, 1954; 78801, April 24, 1954; 79584, August 6, 1954; 80073, October 8, 1954.

Bharat Calico Printing Mills, Grand Trunk Road, Putlighar, Amritsar. 78935, May 21, 1954.

(Messrs.) Bharat Surjodaya Mills Company Limited, The, Post Maninagar, Ahmedabad-8. 77840 to 77842, January 6, 1954; 78091 and 78093, January 30, 1954; 78144, February 4, 1954; 78092, January 30, 1954; 78377, March 4, 1954; 78367, March 2, 1954; 78859 to 78861 and 78863, May 4, 1954; 80211, October 18, 1954.

Birla Cotton Spg. & Wvg. Mills Ltd., The, Birla Lines, Delhi. 77499, November 25, 1953; 78021, January 25, 1954.

Bombay Union Dyeing Mills, The, Proprietors; M/s. Megji Mathardas, 71, Government Gate Road, Parel, Bombay 12. 77287 to 77289, October 24, 1953; 77714, December 19, 1953; 77769, December 28, 1953; 77816, December 31, 1953; 77824, January 4, 1954; 77877 and 77881, January 12, 1954; 78061 and 78062, January 27, 1954; 78157 and 78158, February 6, 1954; 78187, February 13, 1954; 78230, February 17, 1954; 78371, March 3, 1954; 78670, April 3, 1954; 78755, April 17, 1954; 78841, May 3, 1954; 78851 and 78852, May 3, 1954; 79046 and 79047, May 31, 1954; 79179, June 14, 1954; 79222, June 21, 1954; 79253, June 24, 1954; 79331 and 79332, July 2, 1954; 79347 and 79348, July 3, 1954; 79377, July 10, 1954; 79403 and 79404, July 13, 1954; 79445, July 21, 1954; 79564 and 79565, August 4, 1954; 79681 and 79682, August 18, 1954; 80423 and 80424, November 6, 1954; 80597 and 80598, November 18, 1954.

(M/s.) Burma Prints, 36A, Nesbit Road, Mazgaon, Bombay 10. 79794, August 31, 1954.

Cadell Weaving Mill Co. Ltd., 400, Cadell Road, Bombay 28. 79327 and 79328, July 2, 1954; 79388 to 79390, July 12, 1954; 79964 to 79969, September 23, 1954; 80785, December 1, 1954.

Calico Dyeing and Printing Works, Industrial Estates, 41E, Parel Chawl Road, Lalbaug, Bombay 12. 77672 to 77675, December 16, 1953; 77760 and 77761, December 26, 1953; 77818 to 77820, January 4, 1954; 77864 to 77866, January 9, 1954; 78176 to 78180, February 13, 1954; 78242 and 78243, February 19, 1954; 78363 and 78365, March 1, 1954; 78472 to 78474, March 16, 1954; 78516 to 78518, March 20, 1954; 78520 and 78521, March 20, 1954; 78646, April 1, 1954; 78662, April 2, 1954; 78737 to

78740, April 15, 1954; 78789 to 78791, April 22, 1954; 78802 and 78803, April 24, 1954; 78865 and 78866, May 6, 1954; 78895 and 78896, May 14, 1954; 78985 to 78989, May 25, 1954; 79041, May 31, 1954; 79053 to 79055, June 1, 1954; 79156 and 79157, June 11, 1954; 79182 to 79184, June 14, 1954; 79199 to 79202, June 17, 1954; 79243 to 79245, June 24, 1954; 79327 and 79328, July 2, 1954; 79391 to 79394, July 13, 1954; 79414 and 79415, July 16, 1954; 79438, July 20, 1954; 79464 to 79466, July 23, 1954; 79608 to 79610, August 11, 1954; 79623 and 79624, August 24, 1954; 79687 and 79688, August 23, 1954; 79803 to 79805, August 31, 1954; 79806 and 79807, September 1, 1954; 79859 and 79860, September 8, 1954; 79924 and 79925, September 17, 1954; 79927 to 79929, September 18, 1954; 80024 to 80027, September 29, 1954; 80187 to 80190, October 16, 1954; 80303 and 80304, October 21, 1954; 80396 to 80403, November 3, 1954; 80448 to 80453, November 8, 1954.

Calico Printers' Association Limited, The, Calico Printers, St. James's Buildings, Oxford Street, Manchester, England. 77810 to 77812, December 30, 1953; 78452 and 78453, March 15, 1954.

Central India Spg., Wvg. & Mfg. Co. Ltd., The, Bombay House, Bruce Street, Fort, Bombay. 77623 to 77642, December 11, 1953; 79635 to 79637, 79639 and 79640, August 16, 1954.

Century Spg. and Mfg. Co. Ltd. The, Queens Mansions, Prescott Road, Fort, Bombay 1, 77582 to 77584, December 3, 1953; 77587 to 77590, December 7, 1953; 77676 to 77681, December 16, 1953; 77698 and 77699, December 18, 1953; 77742 and 77743, December 23, 1953; 77783 to 77787, December 29, 1953; 77849 to 77851, January 6, 1954; 77870, January 9, 1954; 77997, January 18, 1954; 78027, January 25, 1954; 78064, January 27, 1954; 78152 and 78154, February 6, 1954; 78218 to 78220, February 16, 1954; 78229, February 17, 1954; 78419 and 78420, March 10, 1954; 78546 to 78550, March 25, 1954; 78761 to 78766 and 78768 to 78772, April 20, 1954; 78807 to 78809, April 24, 1954; 78819 to 78822, April 27, 1954; 78880 and 78881, May 12, 1954; 78924 and 78925, May 18, 1954; 78966 and 78967, May 24, 1954; 79082 to 79085, June 4, 1954; 79167 to 79171, June 11, 1954; 79236 to 79239, June 20, 1954; 79293 to 79295, June 29, 1954; 79314 to 79316, June 30, 1954; 79357 to 79359, July 5, 1954; 79360 to 79362, July 6, 1954; 79382

to 79386. July 10, 1954; 79424 to 79427. July 17, 1954; 79432 and 79433. July 19, 1954; 79471 to 79474. July 23, 1954; 79484 to 79486. July 24, 1954; 79528 and 79529. July 30, 1954; 79545 to 79547. August 2, 1954; 79575. August 5, 1954; 79590 to 79592. August 7, 1954; 79706. August 23, 1954; 79717. August 25, 1954; 79719 and 79720. August 20, 1954; 79866 to 79868. September 10, 1954; 79890 to 79892. September 14, 1954; 79934. September 18, 1954; 79974 to 79977. September 25, 1954; 79986 and 79987. September 27, 1954; 80040 to 80042. September 30, 1954; 80047. October 1, 1954; 80051, 80054 and 80055. October 8, 1954; 80105 and 80106. October 13, 1954; 80172 to 80174. October 15, 1954; 80212 and 80213. October 18, 1954; 80318 to 80320. October 22, 1954; 80411 to 80415. November 4, 1954; 80435 to 80438. November 6, 1954; 80571 to 80579. November 17, 1954; 80659 to 80661. November 19, 1954.

Chhotalal Mills Limited, The, Kalol, (North Gujarat) 79793. August 31, 1954;

Commercial Ahmedabad Mills Company Limited, The, Near Idga Police Chowky, Ahmedabad 11, 78640. March 31, 1954; 80096. October 9, 1954; 80472. November 11, 1954; 80640 and 80641. November 18, 1954.

Crown Spinning & Manufacturing Co. Ltd., The, Incorporated in India of, 16, Apollo Street, Fort, Bombay-1. 77585. December-17, 1953; 77917 and 77918. January 13, 1954; 78150. February 6, 1954; 78189. February 15, 1954; 78362. March 1, 1954; 78398. March 6, 1954; 78468. March 15, 1954; 78519. March 20, 1954; 78571. March 29, 1954; 78756. April 19, 1954; 79153 to 79155. June 11, 1954; 79322. July 1, 1954; 79368. July 8, 1954; 79412. July 15, 1954; 79491 to 79493, 79495 and 79496. July 26, 1954; 79555. August 4, 1954; 79581. August 6, 1954; 79587. August 7, 1956; 79858. September 8, 1954; 80074 to 80073. October 8, 1954; 80332. October 27, 1954; 80433. November 6, 1954; 80656. November 18, 1954.

Dawn Mills Co. Ltd., The, Fergusson Road, Lower Parel, Bombay No. 13. 77610 to 77612. December 9, 1953.

Delhi Cloth and General Mills Co. Ltd., The, Bara Hindu Rao, Post Box No. 1039, Delhi. 76673, 76674 and 76677. September 3, 1953; 77571. December 3, 1953; 77616 to 77618, December 10, 1953; 77961 to 77970. January 15, 1954; 78054

and 78055. January 25, 1954; 78090. January 29, 1954; 78169 and 78170. February 11, 1954; 78345, 78346 and 78348. February 26, 1954; 78357 and 78358. March 1, 1954; 78428 to 78430. March 12, 1954; 78574 to 78576, 78578, 78580 to 78582, 78587, 78588, 78589, 78592. March 29, 1954; 78675 and 78678. April 5, 1954; 78718 to 78721 and 78723. April 12, 1954; 78774 to 78778. April 20, 1954; 78843, 78845 and 78846. May 3, 1954; 78970, 78971, 78975 to 78978, 78981 and 78982. May 24, 1954; 79211 to 79213 and 79215. June 19, 1954; 79232, and 79233. June 22, 1954; 79375. July 9, 1954; 79409 to 79411. July 15, 1954; 79422 and 79423. July 17, 1954; 79501 to 79504. July 27, 1954; 80110 to 80114, 80116, 80118 and 80120 to 80125. October 13, 1954; 80336 to 80338, 80340 and 80341. October 27, 1954; 80643, 80645, to 80647. November 18, 1954; 80652, 80654 and 80655. November 18, 1954;

Dilip Kumar Dwarkadas, C/o. The Bombay Union Dyeing Mills, 71, Government Gate Road, Parel, Bombay 12, 77331. October 28, 1953;

(Messrs.) Gopal Mills Company Limited, The, Naroda Road, Ahmedabad-2, 78691. April 6, 1954;

Gwalior Rayon Silk Mfg. & Wvg. Co. Ltd., The, Rly, Station. P.O. Birlanagar, Madhya Bharat. 78140 to 78143. February 3, 1954; 80284. October 19, 1954;

H. A. Shah and Co., Vasant Vijay Mills, "Vasant Vijay," 470-471, Worli Road, Bombay 18. 77591. December 7, 1953; 77821. January 4, 1954; 77899. January 12, 1954; 78037. January 25, 1954; 78135 and 78136. February 3, 1954; 78162. February 9, 1954; 78417. March 9, 1954; 78509. March 20, 1954; 78611 and 78612. March 29, 1954; 78701. April 6, 1954; 78705 and 78706. April 7, 1954; 78792. April 22, 1954; 78877. May 8, 1954; 78942. May 22, 1954; 79048. May 31, 1954; 79094. June 5, 1954; 79096 and 79097. June 7, 1954; 79178. June 14, 1954; 79186. June 15, 1954; 79194. June 16, 1954; 79606 and 79607. August 11, 1954; 79662. August 17, 1954; 79722. August 26, 1954; 79985. September 27, 1954; 80100. October 13, 1954; 80170. October 15, 1954; 80317 and 80378. November 1, 1954; 80418. November 4, 1954; 80419. November 6, 1954; 80595. November 18, 1954;

(Messrs.) Harguson's Products Post Box No. 3511. Post Girgaon, Bombay No. 4. 77437 to 77439. November 17, 1953; 79039 and 79040. May 31, 1954; 79064 and 79065. June 2, 1954.

- Harichand Textile Mills Ltd.,** Agra Road, Vikhroli, Bombay. 77701. December 18 1953; 79461. July 23, 1954; 79626 to 79628. August 14, 1954; 79918. September 15, 1954; 79958. September 21, 1954; 80002 and 80003. September 27, 1954.
- (M/s.) Hemchand Amerchand,** New Lane, Mulji Jetha Market, Bombay 2, 77883. January 12, 1954; 78350. February 27, 1954;
- Indian Manufacturing Co. Ltd.,** 16, Apollo Street, Fort, Bombay 1, 78757 to 78760. April 19, 1954;
- India United Mills Ltd.,** The, Indu House, Dougall Road, Ballard Estate, Bombay 1, 77983 to 77986, 77988 and 77990 to 77992. January 15, 1954; 78075. January 27, 1954; 78211 to 78217. February 16, 1954; 78656 to 78661. April 2, 1954; 78783. April 20, 1954; 78901 to 78904. May 15, 1954; 79106 and 79107. June 8, 1954; 79240 to 79242. June 23, 1954; 79290. June 28, 1954; 79481 and 79482. July 23, 1954; 79552. August 2, 1954; 79683 to 79686. August 18, 1954; 79825. September 2, 1954; 79905 to 79908. September 14, 1954; 80179 and 80180. October 15, 1954; 80552. November 15, 1954;
- Jahangir Vakil Mills Co. Ltd.,** The, Outside Delhigate, Post Box No. 16, Ahmedabad. 78534 to 78538. March 23, 1954; 78668. April 3, 1954; 78995 to 78997. May 25, 1954; 79127 to 79130. June 10, 1954;
- Jiyajeerao Cotton Mills Ltd.,** Birlanagar, (Gwalior). 77513 to 77520. November 26, 1953; 78012. January 19, 1954; 78065 78066, 78067 to 78069 and 78070 to 78074. January 27, 1954; 78331 to 78336. February 25, 1954; 79019 to 79037. May 29, 1954; 79532 to 79534, 79537, 79539 and 79541. July 31, 1954; 79655 to 79661. August 17, 1954; 79531, 79536, 79538, 79540 and 79542. July 31, 1954; 80237 to 80265. October 19, 1954;
- Juggilal Kamlapat Cotton Spg. & Wvg. Mills Co. Ltd.,** Kanpur, (Uttar Pradesh) 78261, 78263, 78266 to 78281, 78283 to 78294. February 22, 1954; 78309 to 78311. February 23, 1954; 78457, 78459, 78461 to 78463 and 78467. March 15, 1954; 78577. March 29, 1954; 79246 to 79252. June 24, 1954; 79456 to 79460. July 22, 1954; 79735 to 79743, 79745, 79751, 79756, 79760, 79763 and 79764. August 27, 1954; 80456 to 80462. November 8, 1954;
- Keshoram Cotton Mills Ltd.,** 42, Garden Reach Road, Calcutta-24. 77454, 77457 to 77463 and 77466 to 77473. November 19, 1953; 77793 to 77796, 77800 to 77802. December 30, 1953; 78312. February 24, 1954; 78915 to 78920. May 18, 1954; 79203 and 79205. June 17, 1954; 80425 to 80432. November 6, 1954;
- Khatau Makanji Spg. & Wvg. Co. Ltd.,** The, 6, Ballard Pier, Laxmi Building, Fort, Bombay. 77595 and 77596. December 7, 1953; 77609. December 8, 1953; 77690. December 16, 1953; 77740. December 22, 1953; 77771. December 28, 1953; 77792. December 29, 1953; 77914 and 77915. January 12, 1954; 78000. January 18, 1954; 78019 and 78020. January 22, 1954; 78146. February 4, 1954; 78476. March 16, 1954; 78527 to 78529. March 22, 1954; 78711 to 78714. April 9, 1954; 78857. May 3, 1954; 78983. May 24, 1954; 79049 to 79052. May 31, 1954; 79197 and 79198. June 17, 1954; 79287 to 79289. June 28, 1954; 79323. July 1, 1954; 79355. July 5, 1954; 79436 and 79437. July 19, 1954; 79487. July 24, 1954; 79488. July 26, 1954; 79647 and 79648. August 17, 1954; 79711. August 24, 1954; 79876 and 79877. September 13, 1954; 79889. September 14, 1954; 79911. September 15, 1954; 79945 to 79947. September 21, 1954; 80062 and 80063. October 8, 1954; 80132. October 13, 1954; 80293. October 20, 1954; 80330 and 80331. October 28, 1954; 80470. November 9, 1954; 80507. November 12, 1954.
- Kishindas Parumal, Chandra Chowk, M. J. Market, Bombay-2.** 77005. September 30, 1953;
- Lakshmiratan Cotton Mills Co., Ltd.,** Kalpi Road, Kanpur, Uttar Pradesh. 79848. September 7, 1954; 80231 and 80232. October 18, 1954;
- Mafatlal Fine Spg. and Mfg. Co. Ltd.,** The, of Navasari, Bombay. 77540 to 77548. November 30, 1953; 77706 to 77713. December 19, 1953; 77718 to 77726. December 21, 1953; 77908 to 77912. January 12, 1954; 78117 to 78120. February 2, 1954; 78227. February 16, 1954; 78322 to 78324. February 25, 1954; 78495 to 78497. March 18, 1954; 78687 to 78689. April 5, 1954; 78752 and 78753. April 15, 1954; 79009 to 79012. May 28, 1954; 79132 to 79134. June 10, 1954; 79333 to 79335. July 2, 1954; 79649 to 79654. August 17, 1954; 79796 to 79798. August 31, 1954; 79897 to 79902. September 14, 1954; 80285 to 80295. October 20, 1954; 80323. October 23, 1954.
- (Messrs.) Maneklal Harilal Spinning & Manufacturing Company Limited,** Saraspur Road, Railwaypura, Post, Ahmedabad-2. 77774 and 77775.

December 28, 1953; 77808 and 77809, December 30, 1953; 78058. January 27, 1954; 78454. March 15, 1954; 79613. August 11, 1954; 79672 and 79673. August 18, 1954; 80071 and 80072. October 8, 1954; 80324 and 80325. October 23, 1954; 80552 and 80553. November 16, 1954;

Modi Spg. & Wvg. Mills Co. Ltd., The, Modinagar (Dist. Meerut), Uttar Pradesh. 77213. October 19, 1953; 79270 to 79284. June 28, 1954; 79625. August 14, 1954;

Nagindas Ratilal and Co., 42-44, Champa Galli, Bombay No. 2. 79716. August 25, 1954;

Nagri Mills Co. Ltd., The, Rajpur-Gomatipur Road, P.B. No. 36, Ahmedabad. 77344. October 30, 1953; 78026. January 25, 1954; 78063. January 27, 1954; 78155. February 6, 1954; 78414 to 78416. March 9, 1954; 78664 to 78666. April 3, 1954; 78818. April 27, 1954; 78836. April 30, 1954; 78853. May 3, 1954; 78864 and 78868. January 9, 1954; 79044 and 79045. May 31, 1954; 79219 to 79221. June 21, 1954; 79356. July 5, 1954; 79448. July 21, 1954; 80312 to 80317. October 22, 1954; 80392 to 80395. November 2, 1954;

National Trading Co., The, Bhula Building, Laigate, Surat (W.R.). 77361. January 8, 1954;

Navajivan Mills Limited, The, Kalol (North Gujrat). 78631 to 78639. March 31, 1954; 78743. April 15, 1954; 79500. August 2, 1954; 79614 to 79619. August 11, 1954; 80090 to 80092. October 9, 1954.

New Commercial Mills Co. Ltd., The, Naroda Road, Railwaypura Post, Post Office Box No. 1060. Ahmedabad. 77378. November 4, 1953; 77601 to 77605. December 8, 1953; 77682 to 77685 and 77687. December 16, 1953; 77825 and 77826. January 4, 1954; 77893 to 77895 and 77898. January 12, 1954; 78059 and 78060. January 27, 1954; 78221 to 78224. February 16, 1954; 78499 to 78501. March 18, 1954; 78627 to 78630. March 29, 1954; 78810 to 78813. April 24, 1954; 78627 to 78630. March 29, 1954; 78810 to 78813. April 24, 1954; 79259 to 79268. June 26, 1954; 79697 to 79705. August 23, 1954; 79988 to 79994. September 27, 1954; 80354 to 80365. October 27, 1954; 80603 and 80604. November 18, 1954.

New India Rayon Mills Company Ltd., The, Post Box No. 6302, Lower Parel, Bombay -13, 77106, 77107, 77109, and

77119. October 8, 1953; 77688 and 77689. December 16, 1953; 78017. January 22, 1954; 78241. February 18, 1954; 79416 and 79418. July 16, 1954; 79936 and 79937. September 18, 1954; 80467. November 9, 1954; 79938. September 18, 1954;

New Jahangir Vakil Mills Co., Ltd., The, Bhavnagar. 79516. July 29, 1954;

New Kaiser-I-Hind Spg. and Wvg. Co. Ltd., The, Gorupdeo Road, Bombay-10. 77696 and 77697. December 17, 1953; 77729. December 21, 1953;

New Mahalaxmi Silk Mills Ltd., The, Mathuradas Mills' Compound, Lower Parel, Bombay No. 13. 77906. January 12, 1954; 77854 to 77859. January 7, 1954; 80525 to 80527, 80529 to 80531. November 16, 1954;

New Maneckchock, Spinning and Weaving Co. Ltd., The, Asarwa Post, Ahmedabad 11, 79583. August 6, 1954;

New National Mills Limited, The, Rakhial Road, Ahmedabad-10. 80169. October 15, 1954; 80200. October 16, 1954; 80266. October 19, 1954.

(Messrs.) New Shorrocks Spg. and Mfg. Co. Ltd., The, Nadiad District, Kaira, Bombay. 77645 to 77651 and 77653 to 77655. December 11, 1953; 77884 to 77892. January 12, 1954; 78078 to 78088. January 29, 1954; 78613 to 78624. March 29, 1954; 78649 to 78655. April 2, 1954; 78747 to 78751. April 15, 1954; 78952, 78953 and 78955 to 78961. May 24, 1954; 79126. June 10, 1954; 79803 to 79816. September 1, 1954; 80268 to 80277. October 19, 1954; 80305, 80307 to 80311. October 22, 1954; 80386 to 80391. November 2, 1954; 80484 and 80486. November 11, 1954;

New Vinod Silk Mills Ltd., The, Kastoorchand Mills Estate, Dadar, Bombay 28. 77116 to 77124. October 8, 1953; 78094 and 78095, January 30, 1954;

Panalal Silk Mills Ltd., Atlas Mills Compound, Reay Road, Mazgaon, Bombay 10, 77822 and 77823. January 4, 1954; 78404 and 78407. March 6, 1954; 78530 and 78533. March 23, 1954; 78697 to 78700. April 6, 1954; 79188 to 79193. June 15, 1954; 79225 to 79228. June 22, 1954; 79689 to 79692. August 23, 1954; 79817 to 79820. September 2, 1954; 79981 and 79982. September 27, 1954; 80011 to 80016. September 29, 1954; 80405 to 80410. November 4, 1954;

(Messrs.) Phoenix Mills Ltd., The, Imperial Bank Building, Bank Street, Fort, Bombay. 77522 to 77527. November 27,

1953; 77606. December 8, 1953; 77732 to 77734. December 22, 1953; 77746 and 77747. December 24, 1953; 77827 to 77829. January 4, 1954; 78038 to 78043. January 25, 1954; 78326 and 78327. February 25, 1954; 78351. March 1, 1954; 78482. March 17, 1954; 78566 and 78567. March 26, 1954; 78669. April 3, 1954; 78799. April 23, 1954; 78867. May 6, 1954; 78873 and 78875. May 8, 1954; 78882 and 78883. May 12, 1954; 78943 to 78946. May 26, 1954; 79016. May 28, 1954; 79078. June 2, 1954; 79108. June 8, 1954; 79135 to 79137. June 10, 1954; 79229 and 79230. June 22, 1954; 79256 to 79258. June 25, 1954; 79317 to 79319. June 30, 1954; 79349. July 3, 1954; 79351 and 79353. July 5, 1954; 79399. July 13, 1954; 79421. July 16, 1954; 79595 to 79598. August 11, 1954; 79695 and 79696. August 23, 1954; 79710, 79712 and 79713. August 24, 1954; 79800 and 79801. August 31, 1954; 79849 and 79851. September 7, 1954; 79893 to 79896. September 14, 1954; 79931 to 79933. September 18, 1954; 80017 to 80023. September 29, 1954; 80057 to 80059. October 8, 1954; 80201 to 80204. October 16, 1954; 80296 and 80297. October 21, 1954; 80322. October 23, 1954; 80369. October 29, 1954; 80487 to 80493. November 11, 1954; 80657 and 80658. November 19, 1954;

Podar Textile Mills. Near Khalsa College, Amritsar, 78408. March 6, 1954;

Premier Chemical Industries, Opposite Usha Talkies, Patel Wadi, New Nagardas Road, Andheri, 77971 to 77973 and 77975. January 15, 1954; 78039. January 29, 1954; 79038. May 29, 1954; 79254 and 79255. June 25, 1954; 79292. June 29, 1954; 80029. September 30, 1954;

(1) Purushottamdas Dajibhai, (2) Jayantilal Shivabhai Patel and (3) Kantilal Muljibhai Shah, Trading as Bharat Textile Products Co., Haridas Acharatlal Market, Kapasia Bazar, Ahmedabad-2. 78984. May 25, 1954;

Radhakishan Harbans Lal, Partners, Radhakishan Harbans Lal Finishing and Printing Mills, Ramtirath Road, Amritsar. 78231. February 17, 1954; 78878. May 10, 1954;

Ramesh Chandra & Co., 36, Abdul Rehman Street, Bombay-2. 78354 and 78355. March 1, 1954; 78794. April 22, 1954; 79857. September 18, 1954; 80060. October 11, 1954;

Raipur Manufacturing Company Ltd. The, Outside Saraspur Gate, P.O. Box No. 54, Ahmedabad-2. 78198, 78199, 78202 to

78206. February 15, 1954; 78962 to 78965. May 24, 1954; 80214 to 80217 and 80226 to 80228. October 18, 1954;

Raja Bahadur Motilal Poona Mills Limited The, Hamam House, Hamam Street, Fort, Bombay-1. 79838 to 79842. September 3, 1954;

(Messrs.) Rajnagar Spg. Wvg. & Mfg. Co. Ltd., Near Idga Police Chowky, Ahmedabad 11, 77789. December 29, 1953; 76885. September 21, 1953; 77167. October 18, 1953; 77357. November 3, 1953; 77448 and 77449. November 18, 1953; 77553. November 30, 1953; 77974 and 77975. September 25, 1953; 77552. November 30, 1953; 77656 and 77657. December 14, 1953; 77772 and 77773. December 28, 1953; 78160. February 9, 1954; 78248 and 78249. February 19, 1954; 79462 and 79463. July 23, 1954; 79845. September 3, 1954; 79611 and 79612. August 11, 1954;

Rohit Mills Limited, Post Bag No. 190, Khokhra, Mahmdabad, Ahmedabad-8. 78122 to 78124. February 2, 1954; 78871 and 78872. May 7, 1954;

Sarangpur Cotton Mfg. Co. Ltd., The, Outside Raipur Gate, Post Box No. 19, Ahmedabad. 77608. December 8, 1953; 77670 and 77671. December 15, 1953; 77768. December 28, 1953; 77788. December 29, 1953; 77832 to 77835. January 5, 1954; 77846 to 77848. January 6, 1954; 77871 and 77872. January 9, 1954; 77907. January 12, 1954; 77982. January 15, 1954; 78046. January 25, 1954; 78077. January 25, 1954; 78149. February 5, 1954; 78175. February 12, 1954; 78210. February 15, 1954; 78239 and 78240. February 18, 1954; 78307 and 78308. February 23, 1954; 78325. February 25, 1954; 78368. March 2, 1954; 78378 to 78380. March 4, 1954; 78397. March 5, 1954; 78422 and 78423. March 10, 1954; 78469. March 15, 1954; 78502. March 18, 1954; 78522 to 78524. March 22, 1954; 78540. March 24, 1954; 78648. April 2, 1954; 78692 to 78696. April 6, 1954; 78704. April 6, 1954; 78717. April 10, 1954; 78727 and 78728. April 12, 1954; 78746. April 15, 1954; 78793. April 22, 1954; 78815 and 78816. April 26, 1954; 78849 and 78850. May 3, 1954; 78864. May 4, 1954; 78923. May 18, 1954; 79072 to 79076. June 2, 1954; 79152. June 11, 1954; 79234 and 79235. June 23, 1954; 79296 to 79299. June 29, 1954; 79329 and 79330. July 1, 1954; 79366. July 7, 1954; 79402. July 13, 1954; 79405 and 79406. July 14, 1954; 79428. July 17, 1954; 79447. July 21,

1954; 79497. July 26, 1954; 79509. July 28, 1954; 79548 and 79549. August 2, 1954; 79559 to 79563. August 4, 1954; 79574. August 5, 1954; 79599 and 79600. August 11, 1954; 79693 and 79694. August 23, 1954; 79714. August 24, 1954; 79795. August 31, 1954; 79843. September 3, 1954; 79873 to 79875. September 11, 1954; 79903. September 14, 1954; 79950 and 79951. September 21, 1954; 79997 and 79998. September 27, 1954; 80043. September 30, 1954; 80056 to 80079. October 8, 1954; 80102 to 80104. October 13, 1954; 80236. October 19, 1954; 80370 to 80372. October 29, 1954; 80416. November 4, 1954; 80420 to 80422. November 6, 1954; 80482 and 80483. November 11, 1954; 80562. November 17, 1954; 80599 and 80600. November 18, 1954;

Shah Dwarkadas Dhanji, Mulji Jetha Market, Gaumukh Gally, Bombay-2. 76402. July 23, 1953; 77245 and 77246. October 20, 1953; 79007 and 79008. May 28, 1954;

Shree Niwas Cotton Mills Ltd., The, Delisle Road, Bombay 13. 77481 to 77485. November 21, 1953; 77813 to 77815. December 31, 1953; 78009. January 19, 1954; 78021. January 25, 1954; 78044 and 78045. January 25, 1954; 78096 and 78097. February 1, 1954; 78208 and 78209. February 15, 1954; 78305 and 78306. February 23, 1954; 78372 and 78373. March 3, 1954; 78446 and 78447. March 12, 1954; 78478 and 78479. March 17, 1954; 78494 and 78495. March 29, 1954; 78708 to 78710. April 9, 1954; 78786 to 78788. April 21, 1954; 78814. April 24, 1954; 78884 to 78889. May 12, 1954; 78940 and 78941. May 22, 1954; 79002 and 79003. May 23, 1954; 79068 to 79071. June 2, 1954; 79176 and 79177. June 14, 1954; 79313. June 30, 1954; 79477 and 79478. July 23, 1954; 79510 to 79515. July 28, 1954; 79602 to 79605. August 11, 1954; 79674 to 79676. August 18, 1954; 79724 to 79727. August 26, 1954; 79833 to 79836. September 3, 1954; 80030 to 80039. September 30, 1954; 80342 to 80350. October 27, 1954; 80513 to 80520. November 15, 1954;

Shree Ram Mills Ltd., of Ferguson Road, Parel, Bombay-13, India. 77558 to 77570. December 2, 1953; 77748 to 77750. December 20, 1953; 78102 to 78116. February 1, 1954; 78165 and 78166. February 10, 1954; 78337 to 78344. February 25, 1954; 78386 to 78391. March 5, 1954; 78682 to 78686. April

5, 1954; 78825 to 78833. April 28, 1954; 79138 to 79151. June 10, 1954; 79336 to 79345. July 2, 1954; 79449 to 79455. June 21, 1954; 79569 to 79573. August 4, 1954; 79769 to 79782. August 27, 1954; 79821 to 79824. September 2, 1954; 79954 to 79957. September 21, 1954; 80145 to 80149. October 14, 1954; 80183 to 80186. October 15, 1954; 80792 to 80803. December 2, 1954;

Silver Cotton Mills Co. Ltd., The, Kankaria Road, Post Box No. 27, Ahmedabad 2. 79827 to 79829. September 3, 1954; 80080 to 80089. October 9, 1954; 80126 and 80127. October 13, 1954; 80210. October 18, 1954; 80279 and 80280. October 19, 1954; 80473. November 11, 1954; 80478 to 80481. November 11, 1954; 80549 to 80551, 80555 and 80556. November 16, 1954;

Standard Mills Co. Ltd., The, 29, Veer Nariman Road, Fort, Bombay. 77579 and 77581. December 3, 1953; 77622. December 11, 1953; 77763. December 28, 1953; 77765 to 77767. December 28, 1953; 78225 and 78226. February 16, 1954; 78296 to 78304. February 23, 1954; 78353. March 1, 1954; 78382 and 78383. March 4, 1954; 78451. March 13, 1954; 78480. March 17, 1954; 78854 to 78856. May 3, 1954; 79056 to 79060. June 1, 1954; 79363 and 79364. July 6, 1954; 79396 to 79398. July 13, 1954; 79498. July 26, 1954; 79553. August 3, 1954; 79852 to 79855. September 7, 1954; 79878. September 13, 1954; 80097 to 80099. October 13, 1954; 80351 and 80352. October 27, 1954; 80496 and 80497. November 11, 1954; 80523 and 80524. November 16, 1954;

Svadeshi Mills Co. Ltd., The, Bombay House, Bruce Street, Fort, Bombay. 77900 to 77905. January 12, 1954; 78773. April 20, 1954; 78868. May 6, 1954; 78947 to 78951. May 24, 1954; 79217 and 79218. June 19, 1954; 79320 and 79321. June 30, 1954; 79380 and 79381. July 10, 1954; 79420. July 16, 1954; 79444. July 21, 1954; 79677 to 79680. August 18, 1954; 80151 to 80164. October 15, 1954;

(Messrs.) Vijaya Mills Co. Ltd., The Naroda Road, Ahmedabad-2. 77728. December 21, 1953; 77791. December 25, 1953; 77836 and 77837. January 5, 1954; 79620. August 11, 1954; 79582. August 6, 1954;

Vishnu Cotton Mill Ltd., The, 9, Wallace Street, Fort, Bombay-1. 78991, 78992 and 78994. May 25, 1954; 79004. May 27, 1954;

Vikram Mills Ltd., Gomtipur, Post, Ahmedabad, No. 10, 78968. May 24, 1954; 79018. May 29, 1954;

CLASS 14.—Printed or woven designs on textile goods being checks or stripes.

Ashok Silk Mills, 144, Dharavi Road, Bombay 17. 79114. June 10, 1954;

Davidoss & Co., Sole proprietor Jeenabhai Davidoss, Chickpet, Bangalore-2. 77501 to 77512. November 26, 1953;

Jiyajeerao Cotton Mills Ltd., Birlanagar, (Gwalior). 80733. November 27, 1954;

Juggilal Kamlapat Cotton Spg. & Wvg. Mills Co. Ltd., Kanpur (Uttar Pradesh) 78260, 78264 and 78265. February 22, 1954;

Kesoram Cotton Mills Ltd., 42, Garden Reach Road, Calcutta 24. 77456. November 19, 1953; 77799. December 30, 1953; 77954 and 77955. January 13, 1954; 79204. June 17, 1954;

Messrs. Premier Chemical Industries, Patel Wadi, Opposite Usha Talkies, New Nagardas Road, Andheri East, Bombay (B.S.D.) 77974. January 15, 1954;

Panalal Silk Mills Ltd., Atlas Mill's Compound, Reay Road, Mazgaon, Bombay 10. 79980. September 27, 1954;

Ramesh Chandra & Co., 36, Abdul Rehman Street, Bombay-2. 78426. March 12, 1954; 78508. March 20, 1954; 79856. September 8, 1954; 79871. September 11, 1954;

Sri Krishna Spg. & Wvg. Mills Ltd., Chickpet, Post Box No. 24. Bangalore-2. 77658 to 77660. December 14, 1953; 77700. December 18, 1953; 77744. December 23, 1953; 78817. April 26, 1954;

Bharat Suryodaya Mills Co. Ltd., The, Post Maninagar, Ahmedabad-8. 78905. May 15, 1954;

Bombay Union Dyeing Mills, The, Proprietors:—M/s. Megji Mathradas, 71, Government Gate Road, Parel, Bombay-12. 77715 and 77716. December 19, 1953; 78016. January 21, 1954;

Bradbury Mills Ltd. The, Imperial Bank Building, Bank Street, Fort, Bombay. 78384 and 78385. March 5, 1954;

Central India Spg. Wvg. & Mfg. Co. Ltd., The, Bombay House, Bruce Street, Fort, Bombay. 79641, 79643 to 79646. August 16, 1954;

Century Spg. & Mfg. Co. Ltd., The, Queens Mansions, Prescott Road, Fort, Bombay-1. 77423. November 16, 1953; 77997. January 18, 1954; 78033 and 78034. January 25, 1954; 78421. March 10, 1954; 78823. April 27, 1954; 79830. September 3, 1954; 79973. September 25, 1954; 80662. November 19, 1954; 80828. December 6, 1954;

Crown Spg. & Mfg. Co. Ltd., The, of 16, Apollo Street, Fort, Bombay-1. 77777. December 28, 1953; 79376. July 9, 1954; 79494. July 26, 1954;

Delhi Cloth & General Mills Co. Ltd., The, Bara Hindu Rao, Post Box No. 1039, Delhi. 78347. February 26, 1954; 78427, 78431, 78433 to 78444. March 12, 1954; 78577, 78579, 78584, 78586 and 78590. March 29, 1954; 78676. April 5, 1954; 78724 and 78725. April 12, 1954; 78891. May 14, 1954; 78973, 78974 and 78979. May 24, 1954; 79408. July 15, 1954; 80109. October 13, 1954; 80651. November 18, 1954; 80816. December 4, 1954;

India United Mills Ltd., The, Indu House, Dougall Road, Ballard Estate, Bombay-1. 77987 and 77989. January 15, 1954; 79480. July 23, 1954; 79970. September 23, 1954; 80181 and 80182. October 15, 1954;

Khatau Makanji Spg. & Wvg. Co. Ltd., The, 6, Ballard Pier, Laxmi Building, Fort, Bombay. 78056. January 25, 1954; 78475. March 16, 1954; 79355. July 5, 1954; 79594. August 11, 1954; 79667 and 79668. August 18, 1954;

Mafatlal Fine & Mfg. Co. Ltd., The, Navsari, Bombay State, 78121. February 2, 1954;

Nagri Mills Co. Ltd., The, Raipur-Gomtipur Road, P.B. No. 36, Ahmedabad. 77286. October 24, 1953; 78156. February 6, 1954; 78667. April 3, 1954; 80205 to 80207. October 16, 1954;

National Trading Co., The, Bhula Building, Lalgate, Surat (W.R.) 77862. January 8, 1954;

New Commercial Mills Co. Ltd., The, Naroda Road, Railwaypura Post, P.B. No. 1060, Ahmedabad. 77365, 77366 and 77370. November 4, 1953; 77898. January 12, 1954; 80681. November 23, 1954;

New Kaiser-I-Hind Spg. & Wvg. Co. Ltd., The, Gorupdeo Road, Bombay-10. 77695. December 17, 1953;

New Shorrock Spg. and Mfg. Co. Ltd., The, Nadiad, District Kaira, Bombay. 77652. December 11, 1953; 78954. May

24, 1954; 80191 to 80199. October 16, 1954;

Phoenix Mills Ltd., The, Imperial Bank Building, Bank Street, Fort, Bombay. 77607. December 8, 1953; 78232 and 78233. February 17, 1954; 78374. March 3, 1954; 78481. March 17, 1954; 79079. June 2, 1954; 79081. June 4, 1954; 79434. July 19, 1954; 80022. September 29, 1954; 80321. October 23, 1954;

Sarangpur Cotton Mfg. Co. Ltd., The, Outside Raipur Gate, Post Box No. 19, Ahmedabad. 77717. December 21, 1953; 79077. June 2, 1954;

Shree Niwas Cotton Mills Ltd., The, Delisle Road, Bombay-13. 78008. January 19, 1954;

Standard Mills Co. Ltd., The, 29, Veer Nariman Road, Fort, Bombay. 79554. August 3, 1954; 80171. October 15, 1954;

Tata Mills Limited, Bombay House, Bruce Street, Fort, Bombay. 78185 to 78187. February 2, 1954; 78541 and 78542. March 24, 1954;

Vishnu Cotton Mills Ltd., 9, Wallace Street, Fort, Bombay-1. 78990 and 78993. May, 25, 1954.

1955

CLASS 1.—Articles composed wholly of metal or in which metal predominates, and jewellery.

Adamali M. Kasamji Arsiwalla, 142, Huza-ria Street, Bombay-8. 82808. June 10, 1955.

Agricultural Implements & Brass Utensils, Jagdhari, Punjab. 81357. January 24, 1955. Brass Utensils;

Ajit Industries, 35, Vithaldas Road, Lohar Chawl, Bombay-2. 81676. February 18, 1955. Chokes for fluorescent tube lights;

Alvanthipuram Venkatarama Ramaswami Iyer, Sole Proprietor of S. Venkatarama Ayar & Co., 33, Errabalu Chetty Street, Madras-1. 83150. July 14, 1955. Check valves and foot valves for pumps;

Ames Irrigation Pty. Ltd., of Hunter Street, Sydney, in the state of New South Wales, Commonwealth of Australia. 81674. February 18, 1955. Metal pipe;

(Mrs.) Annamma Abraham, of 1/127, Purasawalkam High Road, Vepery, Madras-7. 82685. May 25, 1955. Mala-yalam printing type faces;

Armstrong Patents Co., Limited, a British Company of Eastgate, Veverley, York-shire, England. 80894. November 24, 1954; (October 18, 1954). A shock absorber casing.

Arnold & Sons Veterinary Instrument Limited, of 54, Wigmore Street, London, W.I, England. 82210. (November 29, 1954). A spring for insertion in the cervix of female in mammals;

Bajaj Brothers, of 76 Lower Circular Road, Calcutta-14, 82777. June 3, 1955. Key holder for holding keys;

Boris Alexis Yashanoff, 28 Harrington Mansions, Calcutta-1. 81073. Decem-ber 28, 1954. Baskets (for flower pots) and like articles made of metal wires or strips. 81538 and 81539, February 7, 1955. Stands for table lamps made of metal wires or strips; 81540. Feb-ruary 7, 1955. Stands for shoes made of metal wires or strips; 81541. Feb-ruary 7, 1955. Stands for magazines, newspapers and like articles made of metal wires or strips; 81542 to 81544.

February 7, 1955. Trays for fruits, sweets and like articles made of metal wires or strips; 81545. February 7, 1955. Stands for flower pots and like articles made of metal wires or strips; 81546 to 81549. February 7, 1955. Stands for table lamps made of metal wires or strips. 81800 to 81804. March 4, 1955. Stands for flowers and creepers made of metal wires or strips; 81805 to 81807.

March 4, 1955. Hanging Baskets for flower pots made of metal wires or strips; 81808 to 81812. March 4, 1955. Stands for table lamps made of metal wires or strips.

Calcutta Chemical Co. Ltd., The, 35 Panditia Road, Calcutta 29. 83075. July 8, 1955. Sign boards tin plate, aluminium boards and hoardings;

Compagnie Parisienne D'Outillage a Air Comprime, of libis rue Roquepine, Paris 8°, France. 82641. May 18, 1955. A spraying machine;

Cromelive (India) Limited, 149, Harrison Road, Calcutta-7. 82602. May 16, 1955. Chair;

Deshpran Engineering Works, S. N. Ray Road, Shahpur, Calcutta-28. 83026. July 4, 1955. Cycle Stands;

Duraiswamy Ratnaseamy, Prop. The, Modern Type Foundry, 26, Broadway, Madras-1. 82749. May 31, 1955. Type faces;

- Dwarkesh Metal Works, Keserat Katra, Mathura U.P. Indian Concern. 81531 and 81532. February 7, 1955. "A pitcher".
- English Metal Mills, The, Moradabad, U.P. 82688. May 26, 1955. Hookah;
- Ernest Thomas James Tapp, of "Sunnendale", Kings Road, Fleet, Hamshire, England. 82200. (October 14, 1954), A badge;
- General Electric Company Ltd., The, of Magnet House, Kingsway, London, W.C. 2, England. 82917. (February 2, 1955), An smoothing iron;
- George Tucker Eyelet Company Limited, of Walsall Road, in the City of Birmingham, England. 83635 and 83636. (March 12, 1955). A combined rivet and mandrel adapted for use in blind riveting;
- German Mergulhao, Proprietor, Agnostic Engineering Works, Round Building, Ripon Road, Jacob Circle, Bombay-11. 82974. June 28, 1955;
- Gestetner Duplicators Limited, a private limited liability company registered in India of 9A Esplanade East, Calcutta 1, India. 81037. December 23, 1954, "A collapsible tube".
- Gordhan Lal Gujrati, C/o. G. C. & Co., Choura Rasta, Jaipur City. 81244. January 14, 1955;
- Graetz Kommandit-Gesellschaft of Postfach 48, Westiger Str. 172, Altena (Westf.), Germany. 82516. May 10, 1955, A spauner with adjusting-gauge;
- Gyanendra Nath Banerjee, of 6 West View, Dadar, Bombay 14. 82024. March 28, 1955, Tongs composed wholly of metal; 82025. March 28, 1955, Burner composed wholly of metal;
- Hafizur Rahman, Son of Abdul Rahman, Kotwali Road, Aligarh (U.P.). 82121. April 5, 1955. Lock; 82122. April 5, 1955. Key;
- Hariram Milji, Proprietor Hercules Metal Pressings, Udhynagar, Sion, Bombay-22. 82157. April 6, 1955. Handles of liquid measures and other utensils;
- Hazai Azimullah, Proprietor M/S. Rose Lock Factory, Masjid Buali Balai Qila, Aligarh, U.P. 81329. January 22, 1955. Locks; 81330. January 22, 1955. Keys;
- Hindusthan Plastic Ltd., Podar Chambers, 109 Parsee Bazar Street, Fort, Bombay-1. 81680 and 81681. February 18, 1955. Bottle caps;
- Hiralal Maganlal Kansara, of Haripura near Tartia Hanuman Surat, Bombay. 84136. October 13, 1955. Pan-Daan or container for Betal Leaves;
- Honlock Industry, of Mohalla Sheikh Dawood, Aligarh (U.P.). 81649. February 15, 1955. Lock;
- Hoover Limited Perivale Greenford, Middlesex, England. 81634 and 81635. (November 2, 1954). A washing machine. 83469. (February 25, 1955). A clothes wringer; 83470. (February 25, 1955). A washing machine; 83471. (February 25, 1955). A combined washing machine and clothes wringer;
- India Crown Cork Company Ltd., of J. K. Building, Dougall Road, Ballard Estate, Bombay-1. 80957. December 15, 1954. Crown corks.
- Indian Cottage Works, The, Kotwali Road, Aligarh (U.P.). 81668. February 17, 1955. Key; 81669 to 81672. February 17, 1955. The lock;
- Iron Product, Huq Cottage Aligarh (Uttar Pradesh). 81201. January 12, 1955. Pad-locks;
- Issac Jackson & Sons (Beltfasteners) Limited, of Hawk-Head Mills, off Hope Street, Old Glossop, Glossop, Derbyshire, England. 80853. December 6, 1954. Fastener for a driving belt.
- J. C. Hui & Company, of 12/B, Netaji Subhas Road, Calcutta. 81354. January 24, 1955. Bengali type faces; 83711. September 7, 1955. Hindi Type Faces;
- (Sardar) Jaswant Singh Chhachhi, Son of Sardar Thakar Singh, trading as Indo Foreign Sales Corporation. 6 Tula Ram Building Sadar Thana Road, Delhi 6. 80548. November 16, 1954. Oil cans made of thin tin plate; 80903. December 11, 1954. Oil cans made of thin tin plate;
- Jawahar Metal Works, Udhay Singh Jain Road, Aligarh (Uttar Pradesh), Indian concern. 81119. December 31, 1954. Pad-lock; 82800. June 7, 1955. Pad-lock.
- Jeewanlal (1929) Limited, 31, Netaji Subhas Road, Calcutta 1, Indian. 81132. January 3, 1955. Kettle.
- K. G. Industries and Motor Parts Co., 6/1A, British Indian Street, Calcutta-1. 81284. January 3, 1954. Luggage carrier.
- Kanaiyalal Haridas Vora, Anantrai Manilal Bhuta and Jayantilal Laldas Mehta, Partners of the firm M/s. Exen Industries 10, Shamset Street, Chhipi Chawl,

- Bombay-2. 83451. August 16, 1955. Fountain pen clip ;
- Kansara Babubhai Fakirchand of Lalgate, Khand Bazar, P.O. Surat, Surat, Bombay. 80521. November 15, 1954. Receptacle (Pandan) (Vernacular name).
- Kid Metal Holloware Mfg. Works, 111/7, Commercial Road, Ambala Cantt. (Punjab). 83782. September 16, 1955. Table bell.
- M. Elias and Bros., Bazar Chitli Kabar, Pahari Bhojla, Gali Sayidian, 1688 House No., Delhi. 81613. February 11, 1955. Cigarette case ;
- Madras Type Foundry, The, 38, Jones Street, Madras-1. 80784. December 1, 1954. Teleegu type fonts ; 83224. July 20, 1955. Malayalam Type Faces ;
- Mangal Engineering Works, Showka Ghat, Banaras, U.P. 81529. February 5, 1955. Spraying machine ; 83645. September 2, 1955. Spraying machine ;
- Mangalore Trading Association Ltd., The, of Car Street Mangalore, Madras. 82648. May 25, 1955. Kanada printing type faces ;
- Md. Saeed, Son of Shri Adbul Rahman, Mohalla Shaikhan, Aligarh (U.P.). 82123. April 5, 1955. Lock ; 82124. April 5, 1955. Key ;
- Md. Said, Sabir Ahmad, Prop. American Lock Works, Purani Kachhari, Aligarh (U.P.). 82125. April 5, 1955. Lock ;
- Metal Bax Company of India Limited, The, of Barlow House, Chowringhee, Calcutta-20, India. 80301. October 21, 1954. Closure for containers ;
- Mohammad Amin, Manager, Shamim Brothers, Manik Chowk, Aligarh (U.P.). 84395. November 10, 1955. Clip ;
- Mohammad Rafi, trading as Messrs. M. R. & Sons of Katra Rajji, Garston, Bastion Road, Delhi. 79978. September 25, 1954. Dummy Watch.
- Mohd. Ibrahim & Co., Beriwal Bagh, Pulbangsh, Delhi-6. 83282. July 26, 1955. Ladies wrist watch (Toy) made of metal ;
- Mohindra Engineering Works, Mandi Road, Mandir Bldg. Jullundur City (Pb.). 84291. November 2, 1955. Cycle saddle ;
- Moosaji Valibhai Baldiwalla, 156, Nagdevi Street, Bombay-3. 81972 to 81974. March 22, 1955. Buckets made wholly of metal or in which metal predominates ;
- Morina Industries, Dadar Street, Aligarh (U.P.). 81936. March 16, 1955. Padlock ;
- Murari Engineering Works, Gell Road, Melliganj, Ludhiana (Punjab State). 80471. November 11, 1954. Chain wheel of a bicycle ;
- Naba Kumar Routh, 56 Clive Street, Calcutta-7. 81038. December 24, 1954. Weights for weighing ;
- Nelson & Company, No. 62, Swami Pillai Street, Choolai, Madras. 80862. December 7, 1954. Tamil type fonts ; 81789. March 3, 1955. Telugu type fonts ; 82470. May 7, 1955. Telugu type fonts ; 84159 and 84160. October 17, 1955. Tamil type fonts ;
- Newton Type Foundry, 80 Wallajah Road, Mount Road—P.O. Madras-2. 84021 and 84022. October 4, 1955 ;
- Nisar Ahmad Son of Khuda Bux, Mohalla Bhulatan, Banaras (Uttar Pradesh). 80936. December 14, 1954. Vermicelli machine (Sewain Machine) ;
- Norton & Company, 1-16, Baker Tiruvengada Mudali Street, Choolai Madras-7. 81017. December 20, 1954. Type fonts composed wholly of metal for purposes of printing ; 82511. May 10, 1955. Type fonts composed wholly of metal for purposes of printing ; 83271 and 83272. July 26, 1955. Type fonts in Tamil language composed wholly of metal for purposes of printing ;
- Orient Trading Co., of 33 Chittaranjan Avenue, Calcutta. 82517. May 11, 1955. Base for electric stove ;
- Parimal Chandra Sarkar, 286 Nischinda No. 2, P.O. Ghosepara, Bally, Dt. Howrah. 82492. May 9, 1955. Cast iron weight ;
- Porwal Pore & Co., of 180-81-82 Guruwar Peth, Pulwala Chowk, Poona-2. 84130. October 12, 1955. A metal cooker box.
- Prakash Udyogalaya, a partnership firm carrying on business as manufactures of stainless steel utensils of Gaiwadi, Girgaon, Bombay 4, Bombay State, India. 81123. January 3, 1955. A spoon.
- R. S. Sewing Machine Co., Bassai (Patiala), PEPSU. 80783. November 30, 1954. A sewing machine.
- Rao Ramarao Javali, "Mission House", P.O. Kurseong, Dt. Darjeeling. 83246. July 22, 1955 ;
- Reliance Industries, Indian firm, Tak Falia, Dist. Surat. 80671. November

- 22, 1954; Coffee or tea pot. 80851. December 6, 1954; Tiffin Carrier handle; Rengaswami Raju Gopalaswami Raju, of Raja Industries, Heber Road, Palakari, Tiruchirapalli, S. India. 80755. November 29, 1954; Cycle lamp;
- S. O. Bowker Limited, of 19-21, Warstone Lane, Birmingham, England. 83546. August 24, 1955. A switch contact.
- S. Qamaruddin & Sons of Riaz Building Pul Bangash, Delhi. 82490. May 9, 1955. A toy;
- Sardar Kartar Singh Kapur, Narinder Singh Kapur and Harbans Singh Kapur, Partners of American Lock Company, 3 East Park Road, Delhi-5. 81975 and 81976. March 23, 1955. Padlocks;
- Shaikh Habibur Rahman, Proprietor, M/s. Habibia Lock Factory, Chowk Bundu Khan, Aligarh (U.P.). 81952. March 18, 1955. Lock; 81953. March 18, 1955. Key;
- Shiva Shankar Gupta, C/o. Shri Pruanchand Gupta, "Chipstone," Nasik Road (Central Railway). 83161. July 15, 1955. A Streamlined and specially partitioned circular dish made of stainless steel, German silver, aluminium brass, copper or any other metal or alloy plated or otherwise for the purpose of serving meals;
- Shree Krishna Ltd., of 20 Mangoe Lane, Calcutta-1. 82083 to 82085. March 31, 1955. Buckets;
- Shree Viswakarma Industries of 192, Cross Street, Calcutta. 81080. December 28, 1954. Bucket; 82479. May 7, 1955. Bucket;
- Sidney Darwish, of Room No. 27B, Queens Mansions, 12, Park Street, Calcutta. 82478. May 7, 1955. Steel Rolling shutters panels, partitions and the like;
- Singer Manufacturing Company, The, of Elizabeth, New Jersey, U.S.A. 80865 to 80868. December 8, 1954. A sewing machine; 81133. January 3, 1955. Sewing machine frame; 82174. April 7, 1955. An indicator plate for a sewing machine;
- Stainless Steel Agencies Ltd., 196-K Gaiwadi, Bombay-4. 83835. September 19, 1955. Spoons;
- Standard Rolling Shutters & Engineering Works, The, Next to Byculia Goods yard, Opposite Jai Hind Cinema, Bombay 12. 82244. April 18, 1955. Shutter gate; 82245. April 18, 1955; Alligator door.
- Swadesi Type Factory, No. 51, Guruvappchetty Street, Chintadripet, Madras, Madras State. 81045. December 24, 1954; Telegu printing types; 82060 and 82061, March 30, 1955. Tamil printing types;
- Takayasu Inone, of 883, Rokkakubashimachi, Kanagawa-ku Yokohama, Japan. 83147. July 13, 1955. A cheque-writer;
- Tarachand Kewalram Shahani, Dina Villa, Pali Road, Bandra, Bombay-20, Indian. 79971. September 23, 1954. "Tongs".
- Thanikachala Mudaliar Sreenivasan, Proprietor Mysore Machine Tools Co., 18/A Street, Fort, Bangalore-2. 84158. October 17, 1955. Luggage carrier for bicycles;
- Traders United, of 107 Sir Vithaldas Chambers, 16, Apollo Street, Fort, Bombay-1. 81373. January 25, 1955. A decorative flower-Vase; 81361 and 81365 and 81369. January 25, 1955. A model; 84066. October 10, 1955. Casts or models to be used as patterns to be multiplied by industrial process;
- Upper India Trading Co. Ltd., 52-M, Connaught Circus, New Delhi. 83783. September 16, 1955. Luggage Carrier for motor cars;
- V. Chiber & Co., of 222-E, Bellasis Road, Byculia, Bombay-8. 82562. May 14, 1955. Push carriage pram for children; Wilson Industries (Indian concern), 56, Shapur Gate, Purva Jadid, Meerut City (Uttar Pradesh) 81118. December 31, 1954. Toy air gun;
- Willys Motors, Inc., Toledo, Ohio, United States of America. 82173. April 7, 1955. Vehicle Front End Assembly;
- Winston Hedley Gilbert of Richards Avenue Croydon, Near Melbourne, in the State of Victoria Commonwealth of Australia. 80281. October 19, 1954. Tap;
- Zahid Hussain Qadri, Prop. M/s. Industrial Trading Company, Upper Fort, Aligarh (U.P.). 81138. January 4, 1955. Lock; 81139. January 4, 1955. Keys; 82170. April 7, 1955. Lock; 82171. April 7, 1955. Key; 82172. April 7, 1955. Lock;
- Zaverchand Dayaram Kansara, Partnership firm (Partners:—Zaverchand Dayaram, Ratilal Zaverchand and Jayantilal Zaverchand), Billimora (W.R.). 82179. April 9, 1955. Trays; 82257. April 21, 1955. Trays; 83423. August 12, 1955. Trays;

CLASS 2.—Books and bookbinding of all materials.

Fattehsab Hasansab, Islamiya Book Depot., Hubli, Bombay. 83634. August 31, 1955. Books ;

CLASS 3.—Articles composed wholly of India-rubber, wood, bone, ivory, papier mache, celluloid, bakelite or like substances or of materials in which such substances predominate except articles included in class 10.

Abul Khare, S/o. Shri Asgar Ali, 94/1, Ashraf Building, New Road, Kanpur, Uttar Pradesh. 80533 and 80534. November 16, 1954. Vamp or top part of the chappal ; 82681 and 82682. May 25, 1955. Cycle saddle cover ;

Adamali M. Kasamji Arsiwalla, 142, Huzuria Street, Bombay-8. 82008. March 24, 1955. Mirror frame ;

Adresh Soap Mills, Bazar Gandhan Wala, Amritsar. 84039. October 5, 1955. Soap ;

Aero Modellers (India), 95, Kamla Market, New Delhi. 81191. January 11, 1955. Toy ; 81827. March 7, 1955. Toy ;

Aryan Brush Company Limited, Lentin Chambers, Dalal Street, Fort, Bombay-1. 82075. March 30, 1955. A shaving brush ; 84330. November 5, 1955. A tooth brush ; 84331. November 5, 1955. A shaving brush ;

Ashoke Glass Works, 5, Lucas Lane, Calcutta. 81607 and 81608. February 10, 1955. Glass plates and bowls ;

Avtar Singh, 49, Dadabhai Road, Vile Parle (West), Bombay 24. 81717. February 22, 1955. Containers for check pessaries ;

B. K. Plastic Industries, of 33, Burtolla Street, Calcutta 7. 82091 to 82094. April 2, 1955. Bowls ;

Bharat Carbon & Ribbon Mfg. Co. Ltd., The, 543, Basantlal Saha Road, P.O. Tollygunge, Calcutta-33. 79904. September 14, 1954. Container cum ash-tray ;

Bir Bal Sareen, Mahal Sarai, Kashmiri Gate, Delhi. 84140. October 14, 1955. Water tap or cock operating handle and its indicator discs ;

Bright Brothers Ltd., 156A, Tardeo Road, Bombay 7. 83151. July 14, 1955. Containers made of plastic or like material ; 84578. December 1, 1955. Beads made of plastic India rubber or like substance ;

Burmah Plastic Moulders of No. 261, Tseekai Maung Tanlay Street, Rangoon, Burma. 81199. January 11, 1955. Combs ;

Colgate Palmolive (India) Ltd., of Janmabhoomi Chambers, Fort Street, Bombay. 82182. April 9, 1955. A cap, for example for tooth-paste tubes and the like ;

Collimator Cases Limited, of Memel Wharf, 399, Albany Road, London, S.E. 5, England. 81731 and 81732. February 25, 1955. Surveyors stuff scale ;

Dadabhoy Sorabji Dubash, 29, Cuffe Parade, Colaba, Bombay-5. 82790. June 6, 1955. Pocket hair brush ;

Dev Plastic Works of 26, Upper Chitpur Road, Calcutta. 82264. April 23, 1955. Container ;

Devprashad Bansal, Manager, The Agarwal Plastic and Rubber Industries, P.O. Birlanagar, Gwalior, M.B. 81704 to 81706. February 21, 1955. Chappal soles & shoe soles made of rubber ;

Donald Holtgren Young, of Southbury, Country of the New Haven, Connecticut, U.S.A. 82716. (November 29, 1954). A combined cap and clip for a writing instrument ; 82717. (November 29, 1954). Fountain pen ;

Dunlop Rubber Company Limited of Fort Dunlop, Erdington, Birmingham-24, England. 82421 (February 2, 1955). A Tyre for a vehicle wheel ; 82422. (January 28, 1955). A Tyre for a vehicle wheel ; 83001. June 30, 1955. A tyre for a vehicle wheel ; 83706. (September 6, 1955). Tyre for a vehicle wheel ; 84131. (June 30, 1955). A tyre for a vehicle wheel ;

E. Shipton & Company Limited, of Fern-down Works, Ferndown Northwood Hills, Middlesex, England. 82258. (November 1, 1954) a container or bottle with a closure cap ;

Gai Limited, General Assurance Building, 232, Hornby Road, Fort, Bombay. 81228. January 14, 1955. Playing disc toy ;

Garware Finance Corporation Limited, Chanpatty Chambers, Sandhurst Bridge, Chanpatty, Bombay-7. 81120. January 3, 1955. A cover and a container ; 81121. January 3, 1955. A container made from plastic or the like material ; 81122. January 3, 1955 ; A bottle made from thermoplastic materials ;

General Electric Company Limited, The, of Magnet House, Kingsway, London, W.C. 2, England. 82916. (February 2, 1955). An electric smoothing iron ;

- Geoffery Manners & Company Limited, of Magnet House, Ballard Estate, Bombay-1. 84040. October 5, 1955. Cap for collapsible tube;
- Girdharlal Poptlal Shah, 546, Jame Jamshed Road, Bhupendra Villa, No. 4, Bombay-19. 84058. October 7, 1955. Plastic or celluloid holder for baby soothers; 84059. Plastic or celluloid holder for bottle feeding teats;
- Globe Rubber Co., The, Kyd Street, Calcutta-16. 83455. August 16, 1955. Rubber sole; 83456. August 16, 1955. Rubber heel;
- Golden Mahal Moulding Factory, No. 7440, Tel Mill, Paharganj, New Delhi. 81198. January 11, 1955. Wooden photo frames;
- Goodyear Tyre and Rubber Company, The, 1144 East Market Street, Akron, Ohio, U.S.A. 81175. January 7, 1955. Tyre;
- Grant James Ltd., 8/A/B, Rowdon Street, Calcutta-20. 82423. May 3, 1955. Chair;
- Harbhajan Singh Sidhu, B.Sc. Hons., A.M.I.P.E., of 347, Shivajinagar, Delisle Road, Bombay-13. 82236. April 16, 1955. Check pessaries; 82237 and 82238. April 16, 1955. Display containers for jewellery and pessaries; 83486. August 22, 1955. Check pessaries; 83487 and 83490. August 22, 1955. Pencil point protectors; 83480 to 83485. August 22, 1955. Diaphragms or Dutch pessaries;
- Harjit Singh Khana, 116, Chittaranjan Avenue, Calcutta-7. 80469. November 9, 1954; Hair clips; 81190. January 10, 1955. Hair clips; 81204. January 12, 1955. Hair clips; 81246. January 14, 1955. Hair clips; 81425. January 27, 1955. Hair clips; 82081 and 82082. March 31, 1955. Hair clips; 84489 and 84490. November 22, 1955. Hair clips;
- India Tyre & Rubber Company Limited, of Inchinnan, Renfrewshire, Scotland. 82683. (March 1, 1955). A tyre for a vehicle wheel; 83887. (April 29, 1955). A tyre for a vehicle wheel;
- Industrial Plastics (India), of 17, Park Street, Calcutta-16. 84056. October 7, 1955. Flange of a bowl;
- Jai Nath Singh, 49, Kalighat Road, P.O. Kalighat, Calcutta. 81287. January 19, 1955. Baby cots;
- Lodge Brothers, 85, Netaji Subhas Road, Calcutta-1. 82842. June 14, 1955. Type-
- writer covers made of Rexine and/or Plastic sheetings or like substances or of materials in which such substances predominate;
- Maddala Veersa Swamy Soda Dealer Hindu (Gavana) Main Road, Anakapalle Visakhapatnam District, 80754. November 29, 1954. Wooden Soda crate;
- National Moulding Co., Ltd., 26, Upper Chitpur Road, Calcutta-7. 83705. September 6, 1955. Bowl;
- Parker Pen Company, The, 219, Court Street, Janesville, Wisconsin, U.S.A. 82731. May 28, 1955. A writing instrument;
- Rathi Nadir Wadia, (Miss), of 19-A, Cubbon Road, Bangalore, 82235. April 16, 1955. Display containers for pessaries and jewellery.
- Sawyer's Inc., P.O. Box 490, Portland 7, Oregon, United States of America. 80706. November 25, 1954. Stereoscopic viewer; 80950. December 14, 1954. Stereoscope for transparencies;
- Seth & Co., of 8, Nemi Road, Dehra Dun, India, an Indian concern, 80705. November 25, 1954. "T-Square".
- Shakuntala Devi Goyal, (Shrimati), of Goyal Industries, 23/21, Shakti Nagar, Delhi. 80856. December 7, 1954. Box of duplicators made of wood;
- Swadeshi Industries Limited, of 33, Netaji Subhas Road, Calcutta. 82821. June 11, 1955. Combs; 84138. October 14, 1955. Container;
- Swadesi Type Foundry, a firm registered under the Indian Partnership Act. No. 51, Guruvappa Chetty Street, Chintadripet, Madras, Madras State. 81044. December 24, 1954. "Telugu printing types".
- Traders United, of 107, Sir Vithaldas Chambers, 16, Apollo Street, Fort, Bombay-1. 81362, 81366, 81370 and 81374. January 25, 1955. A model; 84064. October 10, 1955. Casts or models to be used as patterns to be multiplied by industrial process;
- Usha Textiles Limited, 8/A/B, Lower Rowdon Street, Calcutta-20. 82120. April 5, 1955. File;
- Vadakkeveettil Anthony Andrews, Proprietor, Tyreworks, Briand Square, Bangalore-2, Mysore State. 81030. December 23, 1954. "Pneumatic tyre".

CLASS 4.—Articles composed wholly of glass, earthen ware, or porcelain, clay (burnt or baked), or cement or in which such materials predominate.

Ashoke Glass Works, 5, Lucas Lane, Calcutta. 81748. February 26, 1955. Glass tumbler ;

Ayurved Sevashram Limited, of Udaipur, Rajasthan. 84137. October 13, 1955. A bottle ;

Bengal Distilleries Co., Ltd., The, of 8th Milestone, Grand Trunk Road, North, Post Box No. 661-Cal. Uttarpara, near Calcutta. 81077. December 28, 1954. A bottle ;

Bhagya Luxmi Glass Agency, P-33, Pollock Street, Calcutta-1. 83716. September 9, 1955. Glass phials ;

Commonwealth Trust Limited, The, of Kozhikode-1, Malabar. 82256. April 21, 1955. Roofing tiles ;

Corn Products Refining Co., 17, Battery Place, New York City, New York, U.S.A. 81930. March 15, 1955. A bottle ;

Farrok Khudamurad Irani, "Bloonfield", Nazarbad, Mysore. 83346. August 1, 1955. Bottle ;

Gem Chemical Company Limited, 18A, Shree Gopal Mullick Lane, Calcutta. 81673. February 17, 1955. Glass bottles ;

Gripex (India) Ltd., C-6, Clive Buildings, 8, Netaji Subhas Road, Calcutta-1. 81176 to 81178. January 7, 1955. Bottle ;

Indravadan Bhagwandas Parekh, Cement House, Bhaktinagar, Rajkot, Saurashtra. 82975. June 28, 1955. Ceiling roof ;

Ishwarlal Shamdas Choksey and Jayantilal Ratilal Shah, trading as The National Trading Company, Mangaldas Building, Mangaldas Road, Bombay-2. 81060. December 27, 1954. "A glass jar"

J. C. Gammon (England) Limited, of Burwood House, Caxton Street, London, S.W. 1, England. 83281. July, 26, 1955. A vessel for the estimation of the water content of sand ;

James Hogan, of 38, Habib Park Clare Road, Byculla, Bombay-8. 83183. July 18, 1955. A roofing tile ;

Jagatjit Distilling & Allied Industries Ltd., The, of 148, Sundarnagar, New Delhi 81813. March 4, 1955. A bottle ;

Jitendra Nath Dey, Proprietor Jewel of India Perfume Co., of "Cocola House",

330, Diamond Harbour Road, Calcutta. 82805. June 8, 1955. A bottle ;

Kanpur Bottling Company Limited, of Grand Trunk Road, Kanpur, U.P. 83024. July, 2, 1955. A bottle ;

Katari Colouring Factory, Library Road, Delhi-6. 81309. January-22, 1955. Ink-pot ;

Kishan Gopal Nagpal, Quarter No. 32, Block No. 1-H, New Township Faridabad (Pb.). 84271, November 1, 1955. Mirror Glass ;

Krishna Lall Varma, C/o. Messrs. K. L. Varma & Sons, Gandhi Road, Dehra Dun, U.P. 80843. December 6, 1954. Latrine ; 80844 to 80848. December 6, 1954. Water closet ; 80849 and 80850. December 6, 1954. Latrine ;

Mohd. Yasin Khan, S/o. Ranmast Khan, Mohallah Gulnagar, P.O. Jalesar Town, Dt. Etah, U.P. 80722 to 80727. November 27, 1954. "Glass Bangles".

Nrimal Chandra Roy, 29/3, Grey Street, Calcutta-5. 82199. April 11, 1955. Illuminated photo frame ;

Parle Bottling Company Ltd., Vile-Parle Bombay. 82086. April 1, 1955. Glass bottles ;

Prabhudayal Bhargave, Proprietor, The Midland Fruit and Vegetable Products (India), Masani Station (W. Rly.), Mathura, U.P. 83387. August 6, 1955. A bottle ;

Swastik Agency, The, 165, Govindappa Naick Street, Madras-1. 81305. January 20, 1955. "Glass bottles" ;

Taj Fresh Fruit Products Company, 14/16, Mirza Ali Street, Bombay-9. 81258. January 17, 1955. Bottles ;

Traders United of 107, Sir Vithaldas Chambers, 16, Apollo Street, Fort, Bombay-1. 81363, 81367 and 81371. January 25, 1955. A model ; 81375. January 25, 1955. A decorative flower-vase ; 84067. October 10, 1955. Casts or models to be used as patterns to be multiplied by industrial process ;

Turf Aerated Waters Limited, of Chaktiwadi, 69, Tardeo Road, Bombay-7. 82467. May 3, 1955. A bottle ;

Victoria Glass Works Limited, 10, Clive Row, Calcutta, Indian Company. 80958 and 80959. December 16, 1954. 81890. March 11, 1955. Glass plates ; 81889. March 11, 1955. Glass bowl ; 83717. September 9, 1955 ; Glass bowls ; 83768 and 83770. September 14, 1955, Glass Plates ; 83769. September 14, 1955. Glass bowls ;

CLASS 5.—Articles composed wholly of paper, card-board, mill-board or straw-board (except articles included in Class 2, and paper hangings), or in which such materials predominate.

Abdul Mohamed Abdul Rahman Rawther, Proprietor Nizam Tobacco Factory, Post Box No. 4, Pudukkottai (South India). 80756. November 29, 1954. "Labels";

Aero Modellers (India), 95, Kamla Market, New Delhi. 80501. November 11, 1954. Carton for box; 81192. January 11, 1955. Label;

Adam Abbobaker Mohamed Abbobaker Shahul Hamid, Proprietor, "Aams House", 34, Sir Thiagaraja Road (Pondy Bazaar), Madras-17. 83910. September 26, 1955. Label;

Aiyanadar Palanichamy Nadar, Ramana-dar, Subbunader Palaniappa Nadar—Pravansa Nadar. (2) Mayanadar Kulandavel Nadar, Mayanadar Kulandivel Nadar. (3) Mayanadar Kulandavelnadar, Mayanadar Paulsami Nadar. (4) Pagalam Aiyaswamy Nadar Sundaraswamy Nadar. (5) Annamalainadar, Thangannadar, Appuchinadar, Ratnana-dar Annamalainadar, Indian Subject, trading as Anil Peper Caps Factory, Sivakasi, S. India, (Ramnad Dt.). 80895. December 10, 1954. "Label";

Aravamuthu Chinnakani Nadar Proprietor Arumuga Vilas Soapnut Powder Company, Door No. 7, No. 1, Police Station Lane, Madurai, Madras. 81328. January 22, 1955. Labels; 81999. March 24, 1955. Labels;

B. Aman Bidi Works, Upper Bazar, Sira (Mysore State). 82464 and 82465. May 5, 1955. Labels;

B. V. Aswathaiah & Bros., Nagarthapet, Bangalore City-2. 80757. November 29, 1954. Labels; 84185. October 20, 1955. Label;

Balkishan Das Monga, of Star Plastic Works, 8, Ram Prasad Saha Lane, Calcutta-1. 82558. May 13, 1955. Cards;

Banares Beedi Works, Muslimpur, Vaniyambadi, (South India). 80566 to 80568. November 17, 1954. Labels;

Bhagat Singh & Sons, Bazar Mai Sewan, Amritsar. 80695 and 80696. November 24, 1954. Label;

Bidi Factory, 501, Dhalgar Tola, Jaunpore (Uttar Pradesh). 81130. January 3, 1955. Label;

Blue Bird & Co., Kashmeri Gate, Delhi-6. 83037. July 5, 1955. Labels;

Boota Ram, Proprietor of Sewakon Ki Dokan, Naya Bazar, Saharanpur, (U.P.). 84038. October 5, 1955. Label;

Calcutta Chemical Co., Ltd., The, 35, Panditia Road, Calcutta-29. 83074. July 8, 1955. Posters, show-cards;

Deepak Oil Mills, Shahdara, Delhi. 84298. November 2, 1955. A label;

Delhi Commercial Corporation, Barry Market, Sadar, Bazar, Delhi-6. 80565. November 17, 1954. "A carton";

Dhana Lal Manna Lal and Ram Narain, of Bhagwan Das Ram Narain, Nichhi Bagh, Banaras (U.P.). 81847. March 10, 1955. Labels;

Dhanapal Chettiar Bangaru Chettiar, Trading as Murali Soap Works, 220, T.H. Road, Madras-21, S. India. 82193. January 19, 1955. Label; 83457. August 16, 1955. Label;

Eagle Playing Card Mfg. Co., Lal Kuan, Delhi. 80502, 80503 and 80505. November 11, 1954. Playing cards; 81047. December 24, 1954. Playing cards;

Express Beedi Factory, Gudiyatham, Madras. 82224. April 14, 1955. Labels;

Ganapathiappa Palaniappa Mudaliar, Proprietor Regina & Co., 32, Dhanappa Mudaliar Street, Madurai, Madras. 83684. September 5, 1955. Labels;

Girdhari Lall, Proprietor Frontier Trading Company House No. 6819, Beri Wala Bagh, Pul Bangash, Delhi. 83296. July 27, 1955. Packing paper;

Goetze (India) Ltd., P.B. No. 187, New Delhi. 81937. March 18, 1955. Labels;

Gouri Shankar Jaiswal, Proprietor of Chowdhury Lala & Co., P.O. Simri, Bakhtiarpur, Dist. Monghyr. 83904. September 23, 1955.

Gurbachan Singh Tarlochan Singh, of 428, Katra Nabi Bux Sadar Bazar, Delhi. 83297. July 27, 1955. Paper for packing articles;

Gyan Chand Arora, 6/A, Jagabandhu Boral Lane, Calcutta-7. 83474. August 19, 1955. Labels for fountain pen cases;

Indra Perfumery Co., Sadar Bazar, Delhi-6. 82095. April 4, 1955. Labels.

Jassasingh Kabali, Dhab Wastiram, Amritsar. 84200. October 21, 1955. Label;

Jiwan Lal, 1989 Dariba Khurd, Delhi-6. 83515. August 30, 1955. Labels;

- Kadarnatoha Lalkan Sahiv of Pidarikovil Street, Nagapattinam, S. India. 83374. August 4, 1955. Label;
- Kaliappa Palaniappa Nadar, (2) Kaliappa Palaniappa Rajendran, (3) Kaliappa Palaniappa Dharmarajan and (4) Kaliappa Palaniappa Ganesan trading as Kali Aerated Water Works, Virudhunagar, Ramnad District, Madras. 80466. November 8, 1954. Labels; 80665. November 19, 1954. Labels; 80780. November 30, 1954. Labels; 80857. December 7, 1954. Labels;
- Kandasamy Rethinam Chettiar, 47 Town Hall Road, Madurai, Madras. 83465. August 16, 1955. Labels;
- Kashi Zarda Company, Kashipura, Banaras (Uttar Pradesh). 81129. January 3, 1955. Label;
- Kattayakar Soap Factory, Muslimpur, Vaniyambadi, Madras. 81682. February 18, 1955. Labels;
- Kishan Chand, Narain Das and Hira Lal, of Jonewhite Footwear, Jaswant Building, Agra (U.P.). 82665. May 20, 1955. Label;
- Kumaraswamy Nadar Rajagopal, Jile Vilas Soda Factory, 136-137, Bazaar Street, Kovilpatty (S. India). 83493. August 22, 1955. Label;
- (1) Laguduva Kovindaier Balaier Lagshumanai, (2) Laguduva Kovindaier Balaier Venkatrameier and (3) Laguduva Kovindaier Balaier Hamudu Iyer, trading as L.K.B. Venkataramier & Co., of No. 2, Mahal Vadambokki Street, Madurai, Madras. 84165. October 18, 1955. Labels; 84201. October 22, 1955. Labels;
- Lakshmana Sankarakumar and Senthil Shunmugan trading as "The National Camphor and Hing Trading Company", Door No. 6, No. 1 Police Station Lane, Madurai, Madras. 81327. January 22, 1955. Labels; 81606. February 10, 1955. Labels;
- Laxmiprasad Ramprasad, No. 6, Azad Nagar, Bangalore-2. 81426. January 29, 1955. Containers;
- Leonard Biermans Societe Anonyme, 13/1A, Government Place East, Calcutta. 83353. August 1, 1955. Playing cards;
- Madewel Laboratories, 2666/A, Baradari Sher Afghan, Billimaran, Delhi-6. 82375. May 2, 1955. Labels;
- Metro Perfumery Co., Mori Gate, Delhi-6, 81200. January 12, 1955. Labels; 82721 and 82722. May 28, 1955. A carton;
- Meyyappa Nalchiappa Chettiar, Proprietor, "Seetha Soap Works" Door No. 76, Kovilur Road, Karaikudi, Ramnad District, Madras. 81281. January 18, 1955. Labels; 81306. January 21, 1955. Labels;
- (1) Mitharam Jasharam, (2) Nandlal Mitharam, (3) Balumal Mitharam, of M/s. Mitharam Jasharam, 11/13, Shamshet Street, Chhipi Chawl, Bombay-2. 82964. June 27, 1955. Playing cards;
- Modern Waterproof Papers Mfg. Co., of 109, Masjid Bunder Road, Bombay-3. 82255. April 20, 1955. Waterproof paper;
- Modi Sugar Mills Ltd., Modinagar, Uttar Pradesh. 84187. October 20, 1955. Labels;
- Mohamed Nainer Peer Mohamad Rowther, Proprietor; Royal Sewing Thread Co., No. 14, Kader Owliya 2nd Street, Tirunelveli Petai, Madras. 82913. June 21, 1955. Labels; 84014. October 4, 1955. Labels;
- Mohan Ghee Laboratories, Bazar Sita Ram, Delhi-6. 82719. May 28, 1955. A label;
- Morris Pakkiri Rother-Meerasa Rowthar-Mohamad Nagoor Rowther, Trading as M. P. M. Mohamed Nagoor Rowther and Sons, Morris Beedi Factory, Tenkasi, (Tirunelveli Dt.) S. India. 81612. February 11, 1955. "The label";
- Muthu Pandiyan Chettiar, of 11/45, Chinakadai Bazaar, Paramagudi, Ramnad District, Madras. 84308. November 3, 1955. Labels;
- Muthuswamy Nadar Perumal, Trading as Sabapathy Trading Co., 43, Koolappada Bazaar, Tirunelveli, S. India. 81294. January 19, 1955. "Label";
- (Dr.) Nand Gopal, Proprietor Kumar Chemical Works, Mandi Syed Khan, Agra (U.P.). 83177. July 18, 1955. Label;
- Nanduram Khedanlal Chetganj, Banaras (Uttar Pradesh). 61380. January 25, 1955. Labels;
- Naransami Kuppasawmi, Murugavilas Cigar Factory, North Kottaivasal, Nagapattinam, S. India. 81699. February 21, 1955. Label;
- New India Thread Industries, 78, Model Town, Ludhiana, N. Rly. 81015. December 20, 1954. "Labels";
- P. V. S. Beedies Limited, Post Box No. 7, Kodialbail, Mangalore-3, S. India. 81683. February 18, 1955. Labels;

- Pavri Sons & Co.,** 93/97, Bazar Gate Street, Fort, Bombay. 82234. April 16, 1955. Playing cards;
- Periyaperumal Nadar, Ayyappa Nadar, Chinnappa Nadar, Rathnaswamy Nadar, Proprietor Siriyapushpam Match Works, Kovilpatti (Tirunelveli Dt.) S. India.** 83937. September 28, 1955. Label;
- Popular Button Works, 99, Victoria Road (South), Calcutta-36.** 81954. March 18, 1955. Label;
- Pritam Singh and Shamsher Singh, Proprietors Sappra and Co., Bazar Harnama Shah, Amritsar.** 80989. December 18, 1954. Label;
- R. Singaram Chetty, of Neela North Street, Nagapattinam, Tanjore Dist.,** 82528 and 82529. May 13, 1955. Label;
- Radhabilas Karyalaya, Piter Kunda, Banaras, (Uttar Pradesh)** 80933 to 80935. December 14, 1954. Labels;
- Radhe Lal, son L. Badri Dass and Ramesh Chand son of L. Radhe Lal, trading as Badri Dass Radhe Lal, Rooi Mondi, Sadar Bazar, Delhi-6.** 80854. December 7, 1954. Cartoons;
- Raj Corporation, P. B. No. 200, Chowk, Kanpur, U.P.** 81846. March 10, 1955. Cartoon;
- Ram Lal Poogal II-J/80, Sector 22/D, Chandigarh (Punjab),** 80376. October 30, 1954. Cartoon;
- Ramakrishna & Company, P.O. Box No. 57, Erode, Madras.** 82225. April 14, 1955. Labels;
- Ramdas Sobhraj, 9 Sutar Chawl, Bombay-2,** 82231 to 82233. April 16, 1955. Playing cards; 83637 and 83638. September 1, 1955. Playing cards; 84178. October 19, 1955. Playing cards;
- Ravi Kapur, Trading as R. K. Products, No. 5, Jagabandhu Boral Lane, Calcutta-7.** 80976. December 17, 1954. Label;
- Rosehall & Company, Civil Lines, Kanpur (U.P.)** 84381. November 8, 1955. Shaving brush;
- S. Abdul Shakoar & Co., Jai Pura, Banaras, U.P.** 80932. December 14, 1954. Labels;
- S. C. Venkata Ramaiah Setty, Bharathi Products, Chintamani, (Via) Bangalore.** 83712 to 83715. September 8, 1955. Label;
- Sankarlinga Muthu Pulugandi Mani Thevar, of 22, Sangeetha Vinayagar Koil Street, Madurai, Madras.** 83924. September 27, 1955. Labels;
- Sarangapani Mudaliar Krishnasami Mudabir, Proprietor, Akbar Soap Works, New Town, Vaniambadi-Post, North Arcot Dist. Madras.** 81771. March 2, 1955. Label; 82303. April 25, 1955. Label;
- Sathakutti Vellayan Muthu Chettiar, Proprietor, Muthu Vilas Syrup Company 11/54, Chinnakadia Bazar, Paramagudi, Ramnad Dist., Madras.** 83438. August 13, 1955. Labels;
- Shamsuddin Ahmed, Prop., Diamond Stationery Works, 72, Baitakkhana Road, Calcutta-9.** 83148. July 14, 1955. Labels and the covers of Exercise books, Note books, etc., 84055. October 7, 1955. Labels;
- Sharda Paper-Box Mfg. Co., 100, Byculia Station Road, Bombay.** 81818 to 81821. March 5, 1955. Playing Cards; 82774. June 3, 1955. Playing cards; 83753. September 12, 1955. Playing cards; 82914 and 82915. June 21, 1955. Playing cards;
- Shunmuga Thillaippa Rethnam, of S. Thillaiappa Nadar Sons, of 13, Chittrakara Street, Madurai, 83253.** July 25, 1955. Labels;
- Sivaguranatha Mudaliar Tiruvengadaswamy Mudaliar of Bhimaraja Ramam Co., 7 & 8, Jadamuni Koil Street, Madurai, South India.** 82368. April 30, 1955. Labels;
- (1) Sivathaiya Varatharajan, (2) Arasakumara Soundarapandian and (3) Arasakumara Thangarajan, C/o. N. S. T. V. Neethimohan & Co., Door No. 17A, Vengalakadai Street, Madurai, Madras. 81961. March 21, 1955. Labels;
- Sokkalingam Velayndham Pillai, Eruthukara Street, Nagapatnam, S. India.** 83475. August 19, 1955. Label;
- (1) Subbaiah Palanisamy Nadar, (2) Vaunia Samy Vaunia-Dhanushkodi Nadar, (3) Vaunia Sarny Vaunia Chairmansamy Nadar and (4) Sankaralinga Periyakaruppa Arumachala Duraisamy Nadar, of The Madura Camphor & Hing Supplying Co., Door No. 10, Vengalakadai 2nd Lane, Madurai, Madras. 83174. July 16, 1955. Labels;
- Subbianchettiar Veerappan, Partner T. M. Krishnaswamy Chetty Brother, "Krishna Nilayam", T. M. K. Beedi Factory, Puduppalayam Road, Rasipuram, Salem District, S. India.** 81348. January 24, 1955. Containers. 81349 and 81350. January 24, 1955. Labels; 82220. April 13, 1955. Label;

Surindar & Brothers, Bazar Kathian, Amritsar (N. Rly.) 81016. December 20, 1954. Labels;

Syed Mohamed Shah, Proprietor, The New Light Co., Nazirabad, Lucknow. 81702 and 81703. February 21, 1955. Labels;

Thotha Pillay Marimuthu, Ahimsapuram, Sellur, Tallakulam Post, Madurai, Madras. 83974. October 1, 1955. Labels;

Traders United, of 107, Sir Vithaldas Chambers, 10, Apollo Street, Fort, Bombay-1. 84065. October 10, 1955. A label, greeting card and calendar;

United Fine Art Lithographers, B, Aujirwadi, Mount Road, Mazagaon, Bombay-10. 82797. June 7, 1955. Playing cards; 83095 and 83096. July 9, 1955. Playing cards;

Unnykrishnan Nayar, Vayalala House, Post Pullode, Alatur Palghat, S. Malabar. 80061. October 8, 1954. Set of playing cards; 82178, April 9, 1955. Playing cards;

Venkatachala Mudaliar Thanigachalam and Namberumalswamy, Trading as Thiruthanigai Vilas, Snuff Manufacturers, 46, Konnur High Road, Madras 12, S. India, 81188. January 8, 1955. Label;

Vettalakshmana Gurusamy Paulrajan, Proprietor, Netaji Tea & Coffee Company, No. 2, Jailani Street, Tuticorin, Tirunelveli Dist., Madras State. 80384. November 1, 1954. Wrappers;

Vijay Bharat Thread Mills, Sadar Bazar, Delhi-6. 82466. May 5, 1955. A label; 84186. October 20, 1955. A label;

Virchand Hargovandas, Sole Proprietor of New Kalidas Handhi, 536, Centre Street, Poona-1. 83630. August 30, 1955. Labels; 83631. August 30, 1955. Cartons;

Weldon Sales Corporation, Pratap Building, Original Road, Parharganj, New Delhi. 82209. April 12, 1955. A carton;

CLASS 6.—Articles composed wholly of leather or in which leather predominates, not included in other classes.

James Winston Stott, C/o. 130, Nordon Road, Bamford, Rochdale, Lancashire, United Kingdom. 80557. November 16, 1954. Pickers; 81424. January 27, 1955. Pickers.

CLASS 7.—Paper hangings.

Nil.

CLASS 8.—Carpets, rugs and floor coverings in all materials.

Nil.

CLASS 9.—Lace.

Nil.

CLASS 10.—Boots, shoes and the like foot-wear.

Nil.

CLASS 11.—Millinery and wearing apparel (except articles included in class 10).

(Messrs) K. R. Vithal, Lalsing Building, Kitchen Garden Lane, Bombay-2. 81590 and 81591. February 9, 1955. Brasieres;

CLASS 12.—Goods not included in other classes.

Altar Swed Hussain, Proprietor, Mysore Agarbatti Co., No. 1, Madar Sahed Street, Bangalore-2. 81189. January 8, 1955. Incense pastilles;

Britannia Biscuit Company Limited, The, of 15 Taratola Road, Alipore, Calcutta. 82670. May 21, 1955. A Biscuit;

Chellaram Udavdas, Prop: The Kohinoor Biscuit and Confectionary Co., Dhakji Prabhu Wadi, Ghodapdev, Bombay-10. 83977. October 3, 1955. Biscuits;

Kishanchand Gelaram Dembla, C/o. Bharat Biscuit Factory, Athwadi Bazar, Jalgaon (East Khandesh). 81698. February 21, 1955. Biscuits;

Ram Sarup, S/o. L. Kaka Ram Agarwal, Shayam Sunder S/o. L. Amar Nath Sethi and Sunderlal Chopra, S/o. L. Hira Nand, trading as Shiwalak Industries Corporation, Gowashala Bazar, Hoshiarpur, Punjab. 80547. November 16, 1954. Soap cakes;

CLASS 13.—Printed or woven designs on textile goods (other than checks or stripes).

Ahmedabad Advance Mills Ltd., The, Bombay House, Bruce Street, Fort, Bombay. 83745. September 10, 1955.

Ahmedabad Manufacturing and Calico Printing Co., Ltd. (The Calico Mills), The, Post Box No. 12, Ahmedabad. 81173. January 6, 1955; 81304. January 20, 1955; 81353. January 24, 1955;

- 81437 and 81438. January 31, 1955 ; 81439 to 81441. February 1, 1955 ; 81588 and 81589. February 9, 1955 ; 81767 to 81769. March 2, 1955 ; 81788. March 3, 1955 ; 81828 and 81829. March 7, 1955 ; 82175 and 82176. April 7, 1955 ; 82502 to 82505. May 10, 1955 ; 82776. June 3, 1955 ; 83116. July 11, 1955 ; 83681. September 2, 1955 ;
- Ahmedabad New Textile Mills Company Limited, The, Outside Raipur Gate, Ahmedabad-1. 82026. March 28, 1955 ;
- Ajit Mills Ltd., The, Rakhial Road, Railway-pura Post, Ahmedabad-2, 80859 and 80860. December 7, 1954 ; 82559. May 14, 1955 ;
- Amrit Banaspati Co., Ltd., trading as New Pralhad Mills, East and West Building, Apollo Street, Fort, Bombay. 80975. December 16, 1954 ; 82377. May 2, 1955 ; 83689 to 83691. September 5, 1955 ;
- Amritsar Rayon and Silk Mills Ltd., The, G. T. Road, Amritsar, Indian Company. 81407. January 27, 1955 ;
- Aruna Mills Ltd., The, Naroda Road, Post Box No. 57. Ahmedabad-2. 81140 to 81142. January 4, 1955 ;
- Arvind Mills Ltd., The, Naroda Road, P.B. No. 56, Ahmedabad-2. 80602. November 18, 1954 ; 80789. December 2, 1954 ; 80956. December 15, 1954 ; 81025. December 21, 1954 ; 81261 and 81262. January 17, 1955 ; 81593 and 81594. February 10, 1955 ; 81901. March 11, 1955 ; 82018. March 26, 1955 ; 82722 and 82723. May 28, 1955 ; 82934 and 82936. June 23, 1955 ; 83034 and 83035. July 5, 1955 ; 83163 and 83164. July 15, 1955 ; 83557. August 27, 1955 ; 83926 to 83928. September 27, 1955 ; 84365. November 8, 1955 ; 84528 to 84530. November 26, 1955 ;
- Asarwa Mills Ltd., The, Asarwan Post Office, Ahmedabad-11. 80951 and 80952. December 15, 1954 ; 81071. December 28, 1954 ; 81977. March 23, 1955 ; 82027 and 82028. March 28, 1955 ; 82332 to 82336. April 28, 1955 ; 84437. November 15, 1955 ; 84534. November 28, 1955 ;
- Ashok Silk Mills, 144 Dharabi Road, Bombay-17. 80779. November 30, 1954 ; 80996 to 80999. December 18, 1954 ; 81032. December 23, 1954 ; 81107. December 30, 1954 ; 81263. January 17, 1955 ; 81303. January 20, 1955 ; 81395 to 81396. January 27, 1955 ; 82992. June 30, 1955 ; 83135. July 13, 1955 ; 83162, July 15, 1955 ; 83239 to 83241. July 21, 1955 ; 83368, 83370 and 83371. August 4, 1955 ; 83509 and 83510. August 24, 1955 ; 83591. August 30, 1955 ; 83642 and 83643. September 2, 1955 ; 83908. September 24, 1955 ; 83980. October 3, 1955 ; 84134. October 13, 1955 ; 84246 and 84247. November 1, 1955 ; 84352 and 84353. November 8, 1955 ; 84568 and 84569. December 1, 1955 ;
- Asoka Mills Ltd., The, Naroda Road, P.B. No. 1050, Ahmedabad-2. 80664. November 19, 1954 ; 81039 and 81040. December 24, 1954 ; 81411 to 81413. January 27, 1955 ; 82009. March 25, 1955 ; 83694. September 6, 1955 ; 83767. September 13, 1955 ; 83886. September 21, 1955 ; 84085 to 84088. October 10, 1955 ;
- Bechardas Spg. & Wvg. Mills Co., Ltd., The, Raikhad, Ahmedabad-1. 81156. January 4, 1955 ; 81385. January 25, 1955 ; 81906. March 14, 1955 ; 82369 to 82373. April 30, 1955 ; 82481. May 7, 1955 ; 82792 to 82794. June 7, 1955 ; 83133 and 83134. July 13, 1955 ; 83268 and 83269. July 26, 1955 ; 83473. August 19, 1955 ; 83941. September 28, 1955 ; 84135. October 13, 1955 ; 84438 and 84439. November 15, 1955 ; 84581. December 1, 1955 ;
- Beharilal Rattanchand, Batala Road, Amritsar. 82267. April 25, 1955 ; 83472. August 17, 1955 ;
- Bhalakia Mills Company Limited, The, Khokra Mehmedabad Road, P.O. Box No. 29, Ahmedabad-8, Bombay. 80006 to 80009. September 28, 1954 ;
- Bharat Calico Printing Mills, The, Grand Trunk Road, Putlighar, Amritsar. 80335. October 21, 1954 ; 83190. July 19, 1955 ; 83938. September 28, 1955 ; 84266. November 1, 1955 ; 84334. November 5, 1955 ;
- Bharat Suryodaya Mills Co., Ltd., The, Post Maninagar, Ahmedabad-8. 81460 to 81463. February 2, 1955 ; 81978. March 23, 1955 ;
- Bhatia Dyeing & Printing Mills, Nagardas Road, Andheri, Bombay 41. 83576. August 30, 1955 ;
- Bihari Mills Limited, The, Mithipur, Khokhara Mehmedabad. Post Box No. 4, Ahmedabad-8. 83492. August 22, 1955 ; 83453. August 16, 1955 ;
- Bombay Calico Printing Mills, The, Chah Rajwala, G. T. Road, Amritsar. 83439, 83440, 83442 and 83443. August 13, 1955 ; 83595 to 83597. August 30, 1955 ;

83901 to 83903. September 23, 1955 ;
84142. October 17, 1955 ;

Bombay Union Dyeing Mills, The, Proprietors ; M/s. Megji Mathradas, 71, Government Gate Road, Parel, Bombay-12. 80786. December 2, 1954 ; 81111 to 81114. December 31, 1954 ; 81193. January 11, 1955 ; 81296 and 81298 to 81302. January 20, 1955 ; 81650 to 81656. February 15, 1955 ; 81962. March 21, 1955 ; 82922 and 82923. June 22, 1955 ; 83696. September 6, 1955 ; 83746 and 83747. September 10, 1955 ; 83788 and 83789. September 16, 1955 ; 83973. October 1, 1955 ; 84196 and 84197. October 2, 1955 ; 84203. October 22, 1955 ;

Cadell Weaving Mill Co., Ltd., 400, Cadell Road, Bombay-28. 81266 to 81269. January 18, 1955 ; 81746 and 81747. February 26, 1955 ; 81979 and 81980. March 23, 1955 ; 83125. July 12, 1955 ;

Calico Dyeing and Printing Works, Industrial Estates, 41E, Parel Chawl Road, Lalbaug, Bombay-12. 80558 to 80661. November 16, 1954 ; 80691 to 80693. November 23, 1954 ; 80719 to 80720. November 26, 1954 ; 80840 to 80842. December 6, 1954 ; 80898 to 80901. December 10, 1954 ; 81018 to 81021. December 20, 1954 ; 81049 to 81052. December 27, 1954 ; 81115 to 81117. December 31, 1954 ; 81163 to 81165. January 5, 1955 ; 81179 to 81181. January 7, 1955 ; 81256 and 81257. January 15, 1955 ; 81285 and 81286. January 18, 1955 ; 81359 and 81360. January 24, 1955 ; 81387. January 25, 1955 ; 81507 to 81510. February 4, 1955 ; 81533 to 81537. February 7, 1955 ; 81659. February 16, 1955 ; 81777 and 81778. March 2, 1955 ; 81834 and 81835. March 10, 1955 ; 81934 and 81935. March 16, 1955 ; 82003 to 82006. March 24, 1955 ; 82015. March 25, 1955 ; 82226 to 82230. April 14, 1955 ; 82321 and 82322. April 26, 1955 ; 82518 to 82520. May 12, 1955 ; 82661 to 82663. May 20, 1955 ; 82746 and 82747. May 31, 1955 ; 82883 to 82886. June 20, 1955 ; 82993 to 82997. June 30, 1955 ; 83032 and 83033. July 5, 1955 ; 83067 to 83073. July 8, 1955 ; 83192 to 83196. July 19, 1955 ; 83247 and 83248. July 22, 1955 ; 83323 to 83325. July 29, 1955 ; 83375 to 83377. August 5, 1955 ; 83415 to 83418. August 12, 1955 ; 83476 to 83479. August 20, 1955 ; 83559 to 83563. August 27, 1955 ; 83699 to 83702. September 6, 1955 ; 83868 and 83871. September 20, 1955 ; 83959 and 83960. September 30, 1955 ;

84145 to 84149. October 17, 1955 ; 84161 to 84163. October 18, 1955 ; 84376 to 84380. November 8, 1955 ; 84560 to 84563. November 28, 1955 ;

Calico Processors Limited, Indu House, Dougall Road, Ballard Estate, Bombay-1. 81444 to 81453. February 1, 1955 ; 82100 to 82111, 82114, 82116, 82118 and 82119. April 4, 1955 ; 82127 to 82149. April 6, 1955 ; 82268 to 82295 and 82297 to 82302. April 25, 1955 ; 82358 to 82361 and 82363 to 82366. April 30, 1955 ; 82378 to 82402, 82404 to 82410, 82413 to 82415, 82418 and 82420. May 2, 1955 ; 82484 to 82486. May 7, 1955 ; 82582 to 82584. May 16, 1955 ; 82648. May 19, 1955 ; 82763 to 82765. June 2, 1955 ; 82901, 82903 to 82907 and 82909 to 82911. June 20, 1955 ; 83152, 83155 to 83158. July 14, 1955 ; 84311 to 84314, 84316 to 84318 and 84320 to 84322. November 4, 1955 ;

Century Spg. & Mfg. Co., Ltd., The, Industry House, 159, Churchgate Reclamation, Bombay-1. 80662. November 19, 1954 ; 80698 and 80699. November 25, 1954 ; 80749 to 80751. November 27, 1954 ; 80769 to 80771. November 29, 1954 ; 80787. December 2, 1954 ; 80811. December 3, 1954 ; 80828 to 80830 and 80832 to 80835. December 6, 1954 ; 80872 to 80884. December 9, 1954 ; 80990 to 80994. December 18, 1954 ; 81033 to 81035. December 23, 1954 ; 81061 to 81063. December 27, 1954 ; 81083. December 30, 1954 ; 81124 to 81128. January 3, 1955 ; 81168 to 81170 and 81172. January 6, 1955 ; 81240 to 81243. January 14, 1955 ; 81259 and 81260. January 17, 1955 ; 81282 and 81283. January 18, 1955 ; 81400 to 81406. January 27, 1955 ; 81515 to 81527. February 5, 1955 ; 81552 and 81553. February 7, 1955 ; 81610. February 11, 1955 ; 81637 and 81638. February 14, 1955 ; 81643 to 81645. February 15, 1955 ; 81692 to 81695. February 19, 1955 ; 81724. February 24, 1955 ; 81756. February 28, 1955 ; 81797 to 81799. March 4, 1955 ; 81826. March 7, 1955 ; 81840 and 81841. March 10, 1955 ; 81919 to 81923. March 14, 1955 ; 82020 and 82023. March 26, 1955 ; 82062 to 82067. March 30, 1955 ; 82155 and 82156. April 6, 1955 ; 82304 to 82313. April 25, 1955 ; 82449 to 82461. May 5, 1955 ; 82589 to 82591. May 16, 1955 ; 82652 to 82660. May 20, 1955 ; 82687. May 26, 1955 ; 82734 to 82738. May 30, 1955 ; 82811 to 82818. June 11, 1955 ; 82876 to 82879. June 18, 1955 ; 82956. June 25, 1955 ;

- 82976, 82978 to 82980. June 28, 1955; 83007 and 83009 to 83011. July 1, 1955; 83119 to 83123. July 12, 1955; 83233 and 83234. July 21, 1955; 83255 and 83256. July 25, 1955; 83363 and 83364. August 2, 1955; 83412 to 83414. August 12, 1955; 83550 to 83555. August 26, 1955; 83577 to 83580. August 30, 1955; 83598 to 83603. August 30, 1955; 83759 to 83763 and 83765. September 12, 1955; 83795 to 83800. September 17, 1955; 83917 to 83922. September 26, 1955; 84099 to 84140. October 11, 1955; 84155 and 84156. October 17, 1955; 84288 to 84231. November 1, 1955; 84323. November 4, 1955; 844401 to 84408. November 11, 1955;
- Commercial Ahmedabad Mills Company Limited, Asarva, Ahmedabad-11. 80907. December 11, 1954; 81351 and 81352. January 24, 1955; 82181. April 9, 1955; 82329 and 82330. April 27, 1955;
- Crown Spinning & Manufacturing Co. Ltd., The, 16, Apollo Street, Fort, Bombay-1. 80509. November 15, 1954; 80869. December 8, 1954; 80896 and 80897. December 10, 1954; 81428. January 31, 1955; 81443. February 1, 1955; 81511 and 81512. February 4, 1955; 81570. February 8, 1955; 81761 to 81763. March 1, 1955; 82007. March 24, 1955; 82017. March 25, 1955; 82180. April 9, 1955; 82221. April 13, 1955; 82351. April 28, 1955; 82376. May 2, 1955; 82581. May 16, 1955; 82740. May 30, 1955; 82754. June 1, 1955; 83002 and 83003. June 30, 1955; 83258 to 83261. July 25, 1955; 83283. July 26, 1955; 83351 and 83352. August 1, 1955; 83707 and 83708. September 6, 1955; 83905 to 83907. September 23, 1955; 84192 to 84194. October 20, 1955; 84474 to 84478. November 21, 1955;
- Dayaram Kuvarji, of 42/43, Old Poor House Road, Bangalore-1. 84057. October 7, 1955;
- Delhi Cloth and General Mills Co. Ltd., The, Bara Hindu Rao, Post Box No. 1039. Delhi. 80019. October 13, 1954; 80642, 80644, 80649 to 80650. November 18, 1954; 80758 to 80762. November 29, 1954; 80815 to 80821 and 80823. December 4, 1954; 80983 to 80986 and 80988. December 18, 1954; 80164 to 81067. December 28, 1954; 81229 to 81234. January 14, 1954; 81641. February 14, 1955; 81677 and 81678. February 18, 1955; 81764 to 81766. March 2, 1955; 82029 to 82036. March 28, 1955; 82493 to 82501. May 9, 1955; 82607, 82610 to 82613 and 82616 to 82618. May 17, 1955; 82751. June 1, 1955; 82778 to 82782. June 4, 1955; 82971 to 82973. June 28, 1955; 83015 to 83023. July 2, 1955; 83130. July 13, 1955; 83249. July 22, 1955; 83321. July 29, 1955; 83750. September 12, 1955; 83839 to 83857. September 19, 1955; 83978 and 83979. October 3, 1955; 84105 to 84116, 84118, 84120 and 84122. October 11, 1955; 84224 and 84225. October 28, 1955; 84344 to 84347. November 7, 1955;
- Dileep Dyeing & Printing Works, Suryodaya Mill's Compound, Block No. 5, Tardeo, Bombay-7. 81046. December 24, 1954; 81324. January 22, 1955; 82448. May 5, 1955;
- Elphinstone Dye Works Ltd., The, 400, Cadell Road, Bombay-28. 81745. February 26, 1955; 83873. September 20, 1955;
- Gwalior Rayon Silk Mfg. (Wvg.) Co. Ltd., The, Rly. Stn. & P.O. Birlanagar, Madhya Bharat. 80282. October 19, 1954;
- H. A. Shah & Co., of Vasant Vijay Mills, "Vasant Vijay", 470-71, Worli Road, Bombay-18. 80697. November 25, 1954; 80767. November 29, 1954; 80788. December 2, 1954; 80883. December 9, 1954; 80930 and 80931. December 14, 1954; 81082. December 29, 1954; 81166 and 81167. January 6, 1955; 81194. January 11, 1955; 81225. January 15, 1955; 81378 and 81379. January 25, 1955; 81688 and 81689. February 19, 1955; 81723. February 23, 1955; 81728. February 25, 1955; 81910 and 81911. March 14, 1955; 82099. April 4, 1955; 82469 and 82487. May 7, 1955; 82755. June 2, 1955; 82789. June 4, 1955; 82809 and 82810. June 10, 1955; 82920 and 82921. June 22, 1955; 82944 and 82945. June 24, 1955; 82963. June 27, 1955; 83000. June 30, 1955; 83028 and 83029. July 4, 1955; 83159 and 83160. July 15, 1955; 83173. July 16, 1955; 83238. July 21, 1955; 83299 to 83301. July 28, 1955; 83354. August 2, 1955; 83399. August 9, 1955; 83458. August 16, 1955; 83514 and 83515. August 24, 1955; 83683. September 5, 1955; 83754. September 12, 1955; 83923. September 26, 1955; 83987. October 3, 1955; 84097. October 11, 1955; 84129. October 12, 1955; 84157. October 17, 1955; 84202. October 22, 1955; 84239, 84251 and 84252. November 1, 1955; 84309, November 3, 1955; 84332, November 5, 1955; 84374. November 8, 1955; 84400. November 11, 1955; 84454.

- November 16, 1955; 84525 to 84527. November 26, 1955;
- Harichand Textile Mills Ltd., Agra Road, Vikhroli, Post Bhandup, Bombay. 81501. February 3, 1955; 81504 to 81506. February 4, 1955; 83294 and 83295. July 26, 1955;
- Harguson's Products, P.B. No. 3511. Post Girgaon, Bombay-4. 83294 and 83295. July 26, 1955;
- India United Mills Ltd., The, Indu House, Dougall Road, Ballard Estate, Bombay-1. 81160 to 81162. January 4, 1955; 81205. January 13, 1955; 81245. January 14, 1955; 81295. January 19, 1955; 81331. January 22, 1955; 81442. February 1, 1955; 81642. February 14, 1955; 81715 and 81716. February 22, 1955; 81757 and 81758. February 28, 1955; 81959. March 19, 1955; 82046. March 30, 1955; 82253. April 20, 1955; 82350. April 28, 1955; 82468. May 5, 1955; 82666. May 20, 1955; 82775. June 3, 1955; 82807. June 9, 1955; 82829 and 82830. June 14, 1955; 82955. June 24, 1955; 83014. July 1, 1955; 83179 to 83182. July 18, 1955; 83265 and 83266. July 25, 1955; 83379. August 5, 1955; 83436 and 83437. August 12, 1955; 83541 to 83543 and 83545. August 24, 1955; 83626. August 30, 1955; 83703 and 83704. September 6, 1955; 83809 to 83812. September 19, 1955; 84132 and 84133. October 12, 1955; 84169. October 18, 1955; 84221 to 84223. October 28, 1955; 84281. November 1, 1955; 84348. November 7, 1955; 84440 and 84441. November 15, 1955; 84488. November 22, 1955;
- Jasmine Mills Ltd., Dharavi Road, Mahim, Bombay 16, 82483. May 7, 1955;
- Jiyajeerao Cotton Mills Ltd., Birlanagar (Gwalior). 80728 to 80748. November 27, 1954; 80909 to 80921. December 13, 1954; 81092 to 81101. December 30, 1954; 81414 to 81423. January 27, 1955; 81572 to 81582. February 9, 1955; 81662 to 81664. February 16, 1955; 81815 to 81817. March 5, 1955; 81967 to 81971. March 22, 1955; 82521 and 82525. May 12, 1955; 82822 and 82823. June 13, 1955; 82984 and 82988. June 28, 1955; 83284 to 83288 and 83291. July 26, 1955; 83503. August 22, 1955; 83911, 83913 and 83914. September 26, 1955; 83983 and 83984. October 3, 1955; 84154. October 17, 1955; 84170. October 19, 1955; 84301 and 84303. November 2, 1955; 84492, 84494 and 84495. November 22, 1955;
- Jugal Kishore Botra, Prop., Niranjan Das Dyeing and Printing Works, inside Sultanwind Gate, Amritsar. 81687. February 10, 1955;
- Juggilal Kamlapat Cotton Spg. & Wvg. Mills Co. Ltd., Kanpur, U.P. 79732 and 79734. August 27, 1954; 80947 to 80949. December 14, 1954; 81036. December 23, 1954; 81202 and 81203. January 12, 1955; 81502 and 81503. February 4, 1955; 81713 and 81714. February 22, 1955; 81814. March 5, 1955; 81903. March 12, 1955; 81931. March 15, 1955; 82037. March 28, 1955; 82096. April 4, 1955; 82211. April 13, 1955; 82265 and 82266. April 25, 1955; 82603 and 82604. May 16, 1955; 82649. May 19, 1955; 82677 and 82678. May 25, 1955; 82718. May 28, 1955; 82941. June 23, 1955; 83141 to 83146. July 13, 1955; 83223. July 20, 1955; 83491. August 22, 1955; 83784 to 83786. September 16, 1955; 84268 to 84270. November 1, 1955;
- Kapoor Printing Works, Jamnadas Bldg., Jambulwadi, Bombay-2, 83692 and 83693. September 5, 1955;
- Kesoram Cotton Mills Limited, 42, Garden Reach Road, Calcutta-24. 80712. November 26, 1954; 80804 to 80809. December 2, 1954; 80977 to 80981. December 17, 1954; 81218 to 81227. January 14, 1955; 81554 to 81563. February 7, 1955; 82532 to 82542 and 82545 to 82557. May 13, 1955; 82931 and 82932. June 23, 1955; 83313 to 83315 and 83317 to 83320. July 28, 1955; 83659, 83660 to 83665, 83667 and 83670 to 83680. September 2, 1955; 84023, 84024 and 84026 to 84028. October 4, 1955; 84068 to 84075, 84077, 84079 to 84082 and 84084. October 10, 1955; 84181 to 84184. October 19, 1955; 84282 to 84284. November 2, 1955; 84349 to 84351. November 8, 1955; 84435. November 15, 1955;
- Khanna Dyeing and Printing Works, 38, Sonawala Estates, Goregaon East (B.S.D.), Bombay, 81665 to 81667. February 16, 1955; 81707. February 22, 1955; 81718. February 23, 1955; 81733. February 26, 1955; 82072 and 82073. March 30, 1955; 82352, 82353 and 82355. April 29, 1955; 82752. June 1, 1955; 82761. June 2, 1955; 82786. June 4, 1955; 82795. June 7, 1955; 82962. June 27, 1955; 82990. June 29, 1955; 83165 and 82166. July 15, 1955; 83860 and 83861. September 20, 1955; 83988 to 83990. October 3, 1955;

- Khatau Makanji Mfg. & Wvg. Co. Ltd., The, 6, Ballard Pier, Laxmi Building, Fort, Bombay. 80667. November 20, 1954; 80676 and 80677. November 22, 1954; 80772. November 29, 1954; 80812 to 80813. December 3, 1954; 80858. December 7, 1954; 81028 and 81029. December 22, 1954; 81078 and 81079. December 28, 1954; 81131. January 3, 1955; 81386. January 25, 1955; 81568 and 81569. February 8, 1955; 82043 and 82044. March 29, 1955; 82126. April 5, 1955; 82249 to 82252. April 20, 1955; 82323 and 82324. April 27, 1955; 82644 and 82645. May 18, 1955; 82741 to 82744. May 31, 1955; 82799. June 7, 1955; 83889 to 83895. September 22, 1955; 83963 to 83967, 83969 and 83970. October 1, 1955; 84045 to 84054. October 7, 1955; 84092 to 84096. October 11, 1955; 84124 to 84128. October 12, 1955; 84355 to 84362. November 8, 1955; 84483 to 84486. November 22, 1955;
- Khetani Textile Industries Ltd., 106-7, Bazar Ward, Old Kurta, Kurla, Bombay. 80763 to 80766. November 29, 1954; 81960. March 21, 1955;
- Krishna Calico Printing Company. Outside Ghee Mandi, Amritsar (Pb). 82374. April 30, 1955;
- Lakshmiratan Cotton Mills Co. Ltd., Kalpi Road, Kanpur, U.P. 83722 and 83726. September 10, 1955;
- M. J. Thanawala & Co., trading as M. Best Cotton Rope Manufacturing Company, 47-48, Forbes Street, Fort, Bombay-1. 82672 to 82674. May 23, 1955;
- Madhavdas Kundandas Nagpal, 18, Bhagwan Mansion, 4th floor, Bhagwan Mansion, Dhobi Talao, Bombay-1, 81059. December 27, 1955;
- Mafatlal Fine Spg. & Mfg. Co. Ltd., an Indian Company, of Navsari, Bombay. 80535, 80536 and 80538 to 80540. November 16, 1954; 80612 and 80613. November 18, 1954; 80884 to 80888. December 9, 1954; 80965. December 16, 1954; 81310 to 81323. January 22, 1955; 81381 to 81383. January 25, 1955; 81849 to 81857, 81861 and 81863 to 81876. March 10, 1955; 82434 to 82445. May 3, 1955; 82633 and 82637 to 82639. May 18, 1955; 82826. June 13, 1955; 83235 to 83237. July 21, 1955; 83647 to 83651. September 2, 1955; 83865 to 83867. September 20, 1955; 84292 to 84294. November 2, 1955;
- Mahalaxmi Calico Printing Mills, The, Jail Road, Amritsar. 81358. January 24, 1955; 81530. February 7, 1955; 81586 and 81587. February 9, 1955; 81712. February 22, 1955; 81759. March 1, 1955; 82150. April 6, 1955; 82208. April 12, 1955; 82424. May 3, 1955; 82755. June 1, 1955; 82942 and 82943. June 23, 1955; 83076. July 9, 1955;
- Mahendra Silk Mills Ltd., The, 105, Tambakanta, Bombay-3. 83424 to 83435. August 12, 1955;
- Maneklal Harilal Spg. & Mfg. Co. Ltd., The, Saraspur Road, Railwayपुर Post, Ahmedabad-2. 82560 and 82561. May 14, 1955;
- Modi Spg. & Wvg. Mills Co. Ltd., Modi Nagar, U.P. 83038 to 83041, 83043, 83044 and 83046. July 5, 1955; 83447, 83449 and 83450. August 13, 1955; 83813. September 19, 1955; 83939 and 83940. September 28, 1955;
- Nagpal Printing Mills, 6, Mori Road Mahim, Bombay-16. 82223. April 13, 1955; 82646. May 19, 1955; 83556. August 27, 1955;
- Nagri Mills Co. Ltd., The, Rajpur-Gomatipur Mills Compound, Post Box No. 36, Ahmedabad. 81249 to 81254. January 15, 1955;
- Navjivan Mills Limited, Kalol, North Gujrat. 80687 to 80690. November 23, 1954; 81157 to 81159. January 4, 1955; 81657 and 81658. February 15, 1955; 82827 and 82828. June 13, 1955; 83030. July 4, 1955; 83059 to 83062. July 7, 1955; 83639 to 83641. September 1, 1955; 84188 to 84190. October 20, 1955;
- New Commercial Mills Co. Ltd., The, Naroda Road, P.O. Box No. 1060, Ahmedabad. 80679, 80680 and 80682 to 80686. November 23, 1954, 80836 to 80839. December 6, 1956; 80937 to 80940. December 14, 1954; 81005 to 81009. December 20, 1954; 81272 to 81280. January 18, 1955; 81430 to 81436. January 31, 1955; 81550 and 81551. February 7, 1955; 81597 to 81599. February 10, 1955; 81639. February 14, 1955; 81648. February 15, 1955; 81690 and 81691. February 19, 1955; 81701. February 21, 1955; 81729 and 81730. February 25, 1955; 81742 to 81744. February 26, 1955; 81772 and 81773. March 2, 1955; 81836. March 10, 1955; 83496 to 83499. August 22, 1955; 83508. August 23, 1955, 83593 and 83594.

- August 30, 1955; 83685 to 83688. September 5, 1955; 83697 and 83698. September 6, 1955; 83748 and 83749. September 10, 1955; 83793 and 83794. September 17, 1955; 83808. September 19, 1955; 83863 and 83864. September 20, 1955; 83909, September 24, 1955; 83942. September 28, 1955; 83952. September 30, 1955; 84029 and 84030. October 5, 1955; 84091. October 10, 1955; 84248 to 84250. November 1, 1955; 84264 and 84265. November 1, 1955; 84339. November 5, 1955; 84449, 84450 and 84452. November 16, 1955;
- New India Rayon Mills Co. Ltd., The, P.B.** No. 6302, Lower Parel, Bombay-13. 81565 to 81567. February 7, 1955; 82530 and 82531. May 13, 1955; 82714 and 82715. May 27, 1955; 82762. June 2, 1955; 83270. July 26, 1955; 84276 to 84280. November 1, 1955;
- New Mahalaxmi Silk Mills Ltd., The,** Mathuradas Mill's Compound, Lower Parel, Bombay No. 13. 80101. October 13, 1954; 80523. November 16, 1954; 81247. January 14, 1955; 81595 and 81596. February 10, 1955; 82000 to 82002. March 24, 1955; 82462. May 5, 1955; 82688 and 82689. May 26, 1955; 83359 to 83362. August, 2, 1955; 83396 and 83397. August 9, 1955; 83592. August 30, 1955;
- New Maneekchock Spinning & Weaving Co., Ltd., The,** Post Asarwa, Ahmedabad-11. 81905. March 14, 1955;
- New National Mills Ltd., The,** Rakhial Road, Ahmedabad-10. 80267. October 19, 1954; 80293 to 80300. October 21, 1954; 80366. October 27, 1954; 80385. November 2, 1954; 80463 and 80464. November 8, 1954; 80494 and 80495. November 11, 1954; 80542 to 80546. November 16, 1954; 80922 and 80923. December 13, 1954; 81014. December 20, 1954; 81041 and 81043. December 24, 1954; 81076. December 28, 1954; 81143 to 81145. January 4, 1955; 81235 to 81239. January 14, 1955; 81332 and 81333. January 24, 1955; 81377. January 25, 1955; 81429. January 31, 1955; 81467 to 81470. February 3, 1955; 81915 to 81918. March 14, 1955; 81955, 81956 and 81958. March 19, 1955; 82446 and 82447. May 5, 1955; 82474 and 82475. May 7, 1955; 82577 to 82579. May 14, 1955; 82819 and 82820. June 11, 1955; 82848, 82849 and 82851. June 15, 1955; 82912. June 21, 1955; 82966 and 82967. June 27, 1955; 83105 to 83108. July 11, 1955; 83242 and 83243. July 21, 1955; 83274, 83276 to 83278. July 26, 1955; 83583 to 83587, 83589 and 83590. August 30, 1955; 83953 and 83954. September 30, 1955; 83971 and 83972. October 1, 1955; 84232 to 84235, 84244 and 84245. November 1, 1955; 84570 to 84575. December 1, 1955;
- New Shorrock Spg. & Mfg. Co. Ltd., The,** Nadiad, Dist, Kaira, Bombay. 81146, 81148 and 81150 to 81152. January 4, 1955; 81335 to 81347. January 24, 1955; 81891 to 81896. March 11, 1955; 81944 to 81951. March 12, 1955; 82185 to 82192. April 9, 1955; 82957 and 82958. June 25, 1955; 83097 to 83103. July 11, 1955; 83565 to 83568 and 83570 to 83574. August 27, 1955; 83930 to 83934. September 27, 1955;
- New Vinod Silk Mills Ltd., The,** Kastoorchand Mills Estate, Dadar, Bombay 28. 82691, 82692, 82694, 82696 to 82702 and 82704 to 82713. May 26, 1955;
- Pannalal Silk Mills Ltd., Atlas Mills Compound,** Reay Road, Mazgaon, Bombay-10. 80440 and 80445. November 6, 1954; 80891 to 80894. December 10, 1954; 81108 to 81110. December 31, 1954; 81464 to 81466. February 3, 1955; 81790, 81792, and 81793. March 4, 1955; 82197 and 82198. April 11, 1955; 82801, 82802 and 82804. June 7, 1955; 82888, 82890, 82892 and 82893. June 20, 1955; 84416, 84417, 84419 and 84422 to 84425. November 15, 1955.
- Pesooram Hotchand, Dharmraj Galli,** Mulji Jetha Market, Bombay-2. 80672. November 22, 1954; 81427. January 31, 1955; 81640. February 14, 1955; 83452. August 16, 1955;
- Phoenix Mills Limited, The,** Imperial Bank Building, Bank Street, Fort, Bombay. 80321. October 23, 1954; 80701 to 80704. November 25, 1954; 80826 and 80827. December 6, 1954; 80924 to 80926 and 80928. December 13, 1954; 81010 to 81013. December 20, 1954; 81053 to 81056. December 27, 1954; 81153 to 81155. January 4, 1955; 81289 to 81292. January 19, 1955; 81408 to 81410. January 27, 1955; 81600 to 81605. February 10, 1955; 81660 and 81661. February 16, 1955; 81719 and 81720. February 23, 1955; 81878 to 81880. March 10, 1955, 81982, 81984, 81986 to 81993. March 23, 1955; 82068 to 82070. March 30, 1955; 82201 to 82203. April 11, 1955; 82476 and 82477. May 7, 1955; 82488. May 9, 1955; 82568 to 82572. May 14, 1955;

- 82783 to 82785. June 4, 1955; 82834 and 82835. June 14, 1955; 82998 and 82999. June 30, 1955; 83012 and 83013. July 1, 1955; 83126 to 83128. July 12, 1955; 83306, 83307 and 83309 to 83311. July 28, 1955; 83392 and 83393. August 9, 1955; 83400 to 83402. August 9, 1955; 83444 to 83446. August 13, 1955; 83611 to 83615 and 83617 to 83621. August 30, 1955; 83757 and 83758. September 12, 1955; 83771 to 83774. September 14, 1955; 83805 to 83807. September 17, 1955; 83896 and 83897. September 23, 1955; 83955 to 83958. September 30, 1955; 84042 to 84044. October 6, 1955; 84143 and 84144. October 17, 1955; 84175 to 84177. October 19, 1955; 84240 to 84243. November 1, 1955; 84335 to 84338. November 5, 1955; 84393 and 84394. November 10, 1955; 84466 to 84470. November 19, 1955; 84504 to 84506. November 24, 1955; 84599 to 84600. December 2, 1955;
- Podar Textile Mills, Near Khalsa College, Amritsar. 81963. March 21, 1955; 82473. May 7, 1955;
- Premier Chemical Industries, Opp. Usha Talkies, Patel Wadi, New Nafardas Road, Andheri, Bombay. 82212 to 82217. April 13, 1955; 82592 and 82593. May 16, 1955; 83369. August 4, 1955; 83787. September 16, 1955;
- Radha Kishan Harbanslal, Partners Radha Kishan & Harbanslal Printing and Textile Mills, Ramtirath Road, Amritsar. 81592. February 10, 1955; 83124. July 12, 1955;
- Raipur Manufacturing Co. Ltd., The, Outside Saraspur Gate, P. B. No. 54, Ahmedabad-2. 80218 to 80225. October 18, 1954; 83077 to 83079 and 83081 to 83094. July 9, 1955;
- Raja Bahadur Motilal Poona Mills Limited, The, Hamam House, Hamam Street, Fort, Bombay-1. 83025. July 4, 1955;
- Rajnagar Spg. Wvg. & Mfg. Co. Ltd., The, Near Idga Police Chowky, Ahmedabad-11. 79949. September 21, 1954; 80095. October 9, 1954; 80208 and 80209. October 18, 1954; 80302. October 21, 1954; 80474, 80476 and 80477. November 11, 1954; 80554. November 16, 1954; 80905 and 80906. December 11, 1954; 81026. December 21, 1954;
- Ramkrishna & Company, Post Box No 57, Erode (Madras). 82463. May 5, 1955;
- Ramsarandas Kapur, S/o. L. Daulat Ram Kapur, Proprietor. Kapur Textile Finishing Mills, Outside Ghee Mandi Gate, Amritsar. 80714. November 26, 1954; 80752 and 80753. November 27, 1954; 80929. December 14, 1954; 80960. December 16, 1954; 81248. January 15, 1955; 81288. January 19, 1955; 81609. February 11, 1955; 81675. February 18, 1955; 82680. May 25, 1955; 83149. July 14, 1955;
- Sarangpur Cotton Mfg. Co. Ltd., The, Outside Raipur Gate P. B. No. 19, Ahmedabad. 80669. November 22, 1954; 80715 to 80718. November 26, 1954; 80773 to 80777. November 30, 1954; 80863. December 7, 1954; 80902. December 11, 1954; 80961 to 80964. December 16, 1954; 81023 and 81024. December 21, 1954; 81074 and 81075. December 28, 1954; 81103 to 81106. December 30, 1954; 81134 to 81137. January 4, 1955; 81206 to 81213. January 13, 1955; 81264 and 81265. January 18, 1955; 81325 and 81326. January 22, 1955; 81393 and 81394. January 27, 1955; 81454 to 81457. February 2, 1955; 81513 and 81514. February 5, 1955; 81584 and 81585. February 9, 1955; 81708 to 81710. February 22, 1955; 81749 to 81751. February 28, 1955; 81794 and 81796. March 4, 1955; 81822. March 5, 1955; 81885 to 81887. March 10, 1955; 81907 to 81909. March 14, 1955; 82088 and 82089. April 2, 1955; 82092. April 4, 1955; 82177, 82183 and 82184. April 9, 1955; 82204 to 82207. April 12, 1955; 82356. April 29, 1955; 82431. May 3, 1955; 82506 to 82509. May 10, 1955; 82526 and 82527. May 13, 1955; 82756 to 82758. June 2, 1955; 82824. June 13, 1955; 82928 and 82919. June 21, 1955; 82982 to 82983. June 28, 1955; 83027. July 4, 1955; 83049 and 83050. July 5, 1955; 83167 to 83171. July 15, 1955; 83250. July 23, 1955; 83292 and 83293. July 26, 1955; 83355 to 83358. August 2, 1955; 83394 and 83395. August 9, 1955; 83505 to 83506. August 22, 1955; 83507. August 23, 1955; 83511 to 83513. August 24, 1955; 83622 to 83625. August 30, 1955; 83644. September 2, 1955; 83755. September 12, 1955; 83858. September 20, 1955; 83915 and 83916. September 26, 1955; 83944 to 83948. September 29, 1955; 84013. October 4, 1955; 84151 to 84153. October 17, 1955; 84209 to 84211. October 22, 1955; 84236 to 84238. November 1, 1955; 84388 to 84392. November 10, 1955; 84426. November

15, 1955; 84576 and 84577. December 1, 1955; 84591 to 84596. December 2, 1955;

Shantilal Bechardas Patel, Proprietor. Vikram Industries, 167, Bhavani Shankar Road, Dadar, Bombay-28. 80966, 80969 to 80974. December 16, 1954;

Shah Dwarkadas Dhanji, Mulji Jetha Market, Ganmukh Gally, Bombay. 81102. December 30, 1954; 83064. July 7, 1955; 83494 and 83495. August 22, 1955;

Sharda Dyeing & Printing Works, Atlas Mills Compound, Reay Road, Bombay-10, 81877. March 10, 1955;

Shree Madhusudan Mills, Globe Mill Passage, Delisle Road, Bombay-13. 83516 to 83524, 83526 to 83532, 83534 to 83538 and 83540. August 24, 1955; 83876 to 83882. September 20, 1955;

Shree Mohan Dyeing, Printing and Weaving Mills, Gandhi Mansion, New Silk Bazar, Kalbadevi Road, Bombay 2. 81355 and 81356. January 24, 1955;

Shree Niwas Cotton Mills Ltd., The, Delisle Road, Bombay 13. 80876 to 80882. December 9, 1954; 81084 to 81090. December 30, 1954; 81491 to 81499. February 3, 1955; 81780 to 81787. March 3, 1955; 82010 to 82014. March 25, 1955; 82342, 82343 and 82345 to 82348. April 28, 1955; 82425 and 82426. May 3, 1955; 82668 and 82669. May 21, 1955; 82831 to 82833. June 14, 1955; 83051 to 83056. July 6, 1955; 83382 to 83386. August 6, 1955; 83652 to 83658. September 2, 1955; 83874 and 83875. September 20, 1955; 84015 to 84020. October 4, 1955; 84090. October 10, 1955; 84253 to 84258 and 84260. November 1, 1955; 84366 to 84373. November 8, 1955;

Shree Ram Mills Limited, of Ferguson Road, Parel, Bombay-13. 80792 to 80803. December 2, 1954; 81614 to 81633. February 12, 1955; 82047 to 82058. March 30, 1955; 82853 to 82870 and 82872 to 82875. June 17, 1955; 83326 to 83345. July 29, 1955; 83814 to 83834. September 19, 1955; 83994 to 84000 and 84002 to 84005. October 3, 1955;

Shree Subhlaxmi Mills Co. Ltd., Station Road, Cambay. 80788. November 30, 1954; 82766 to 82773. June 3, 1955; 83804. September 17, 1955; 83862. September 20, 1955; 84033 to 84037. October 5, 1955; 84062 and 84063. October 8, 1955; 84172 to 84174.

October 19, 1955; 84263. November 1, 1955; 84304 and 84305. November 2, 1955;

Silver Cotton Mills Company Limited, The, Near Jagnath Mahadev Kankaria Road, P. B. No. 27, Ahmedabad. 80781 and 80782. November 30, 1954; 80852. December 6, 1954; 80861. December 7, 1954; 80944 and 80945. December 14, 1954; 80953 to 80955. December 15, 1955; 81027. December 18, 1954; 81182, 81185 to 81187. January 8, 1955; 81214 to 81217. January 17, 1955; 81384. January 25, 1955; 81458 and 81459. February 2, 1955; 81487 to 81490. February 3, 1955; 81646 and 81647. February 15, 1955; 81721 and 81722. February 23, 1955; 81774 and 81775. March 2, 1955; 81779. March 3, 1955; 81900. March 11, 1955; 81932 and 81933. March 16, 1955; 81938. March 18, 1955; 82071. March 30, 1955; 82077. March 31, 1955; 82432 and 82433. May 3, 1955; 82798. June 7, 1955; 83117. July 12, 1955; 83175 and 83176. July 16, 1955; 83267. July 25, 1955; 83410. August 12, 1955; 83791 and 83792. September 17, 1955; 84031. October 5, 1955; 84164. October 18, 1955; 84306 and 84307. November 3, 1955; 84363. November 8, 1955; 84413. November 12, 1955;

Standard Mills Co. Ltd., The, 29, Veer Nariman Road, Fort, Bombay. 80666. November 20, 1954; 80670. November 22, 1954; 80824 and 80825. December 6, 1954; 80982. December 18, 1954; 81031. December 23, 1954; 81057. December 27, 1954; 81081. December 29, 1954; 81195 to 81197. January 11, 1955; 81734 to 81739 and 81741. February 26, 1955; 81842 to 81845 and 81881 to 81884. March 10, 1955; 81925 and 81926. March 15, 1955; 82259, 82260 and 82261. April 23, 1955; 82515. May 10, 1955; 82573 to 82576. May 14, 1955; 82605. May 17, 1955; 82651. May 20, 1955; 82745. May 31, 1955; 82880 to 82882. June 20, 1955; 83136 to 83140. July 13, 1955; 83231 and 83232. July 21, 1955; 83751. September 12, 1955; 83801 and 83802. September 17, 1955; 83898 to 83900. September 23, 1955; 83943. September 28, 1955; 83991 to 83993. October 3, 1955; 84041. October 6, 1955; 84215 and 84217. October 28, 1955; 84409 and 84410. November 11, 1955;

Swadeshi Cotton Mills Company Limited, Kanpur, U.P. 80580 to 80582, 80586, 80587, 80589 and 80590. November

- ber 17, 1954; 81000 to 81003. December 18, 1954; 81500. February 3, 1955; 81696 and 81697. February 19, 1955; 81725 and 81726. February 24, 1955; 83262 to 83264. July 25, 1955; 83500 and 83501. August 22, 1955;
- Swadeshi Industries, Ltd., of 33, Netaji Subhas Road, Calcutta. 82158 to 82161. April 6, 1955; 83065, July 7, 1955; 83178. July 18, 1955;
- Tata Mills Ltd., The, Bombay House, Bruce Street, Fort, Bombay. 81471 to 81477. February 3, 1955; 81927 to 81929. March 15, 1955; 82836 to 82841. June 14, 1955; 83459 to 83464. August 16, 1955; 83604 to 83610. August 30, 1955; 84206 and 84207. October 22, 1955; 84427 to 84432. November 15, 1955; 84590. December 2, 1955;
- Tulsi Ram, Proprietor, Panna Calico Printing Mills, R. B. Gagar Mall Road, Amritsar. 81399. January 27, 1955; 82491. May 9, 1955; 82900. June 20, 1955;
- Usha Dyeing, Bleaching and Printing Mills Ltd., Agra Road, Vikroli, Bombay. 82750. May 31, 1955; 83709. September 6, 1955; 83718. September 10, 1955;
- Vaishno Calico Dyeing and Printing Mills, near Imperial Bank, Amritsar. 81174. January 7, 1955; 82097, April 4, 1955; 82585. May 16, 1955; 83367. August 4, 1955;
- Victoria Mills Limited, De Lisle Road, Parel, Bombay 13. 81823. March 7, 1955; 81899. March 11, 1955; 81902. March 12, 1955; 81939. March 18, 1955; 82019. March 26, 1955; 82039. March 28, 1955; 82154. April 6, 1955; 82314 to 82317. April 25, 1955; 82320. April 26, 1955; 82471 and 82472. May 7, 1955; 82563. May 14, 1955; 82586 to 82588. May 16, 1955; 82650. May 19, 1955; 82671. May 23, 1955; 82759 to 82760. June 2, 1955; 82787 and 82788. June 4, 1955; 82806. June 9, 1955; 82887. June 20, 1955; 82946 to 82950 and 82952. June 24, 1955; 83129. July 12, 1955; 83191. July 19, 1955; 83254. July 25, 1955. 83280. July 26, 1955; 83408. August 9, 1955; 83581 and 83582. August 30, 1955; 83752. September 12, 1955; 83981. October 3, 1955; 84061. October 8, 1955; 84098. October 11, 1955; 84212. October 28, 1955; 84204 and 84205. October 22, 1955; 84396. November 10, 1955; 84465. November 19, 1955; 84502. November 24, 1955; 84589. December 1, 1955;
- Vishnu Cotton Mill Ltd., The, of Wallace Street, Fort, Bombay 1. 80889. December 9, 1954;
- Webbing and Belting Factory Limited, of Hasan Building, Nicholson Road, Delhi-6. 81636. February 12, 1955;
- Yamuna Mills Limited, The, Goya Gate, Baroda. 81069. December 28, 1954;
- CLASS 14.**—Printed or woven designs on textile goods being checks or stripes;
- Ajit Mills Limited, The, Rakhial Road, Railwaypura Post, Ahmedabad-2. 82337 to 82341. April 28, 1955; 83184 to 83188. July 18, 1955;
- Arvind Mills Ltd., The, Naroda Road, Ahmedabad-2. 82935. June 23, 1955; 83929. September 27, 1955;
- Ashok Silk Mills, 144, Dharavi Road, Bombay 17. 80995. December 18, 1954; 82897. June 20, 1955;
- Bombay Calico Printing Mills, The, Chah Rajwala, G.T. Road, Amritsar. 83441. August 13, 1955;
- Bombay Union Dyeing Mills, The, Proprietors: M/s. Megji Mathradas, 71, Government Gate Road, Parel, Bombay-12. 82933. June 23, 1955; 83558. August 27, 1955;
- Cadell Weaving Mill Co. Ltd., 400 Cadell Road, Bombay 28, 84032. October 5, 1955;
- Calico Dyeing & Printing Works, Industrial Estates, 41E Parel Chawl Road, Lalbaug, Bombay 12. 81022. December 20, 1954;
- Calico Processors Limited, Indu House, Dougall Road, Ballard Estate, Bombay-1. 82362. April 30, 1955;
- Century Spg. & Mfg. Co. Ltd., The, Industry House, 159, Churchgate Reclamation, Bombay-1. 81171. January 6, 1955; 81754 and 81755. February 28, 1955;
- Crown Spinning and Manufacturing Co. Ltd., The, 16, Apollo Street, Fort, Bombay-1. 80810. December 2, 1954; 80870. December 8, 1954; 83004. June 30, 1955; 83058. July 7, 1955;
- Delhi Cloth and General Mills Co. Ltd., Bara Hindu Rao, Post Box No. 1039. Delhi. 81068. December 28, 1954; 82608 and 82609. May 17, 1955; 82614 and 82615. May 17, 1955; 83836 to 83838. September 19, 1955;
- Gurdittamal Rurmal Bhandari, Proprietor Firm Tokyo Silk Mfg. Co., 15, Amrud Niwas, 1st floor, Lohar Chawl Bombay

2. 81479 to 81486. February 3, 1955 ; 83775 to 83781. September 15, 1955 ;
- India United Mills Ltd., The, Indu House, Dougall Road, Ballard Estate, Bombay-1. 83172. July 15, 1955 ;
- Jiyajeerao Cotton Mills Ltd., Birlanagar (Gwalior) 81091. December 30, 1954 ; 83895 and 83896. October 3, 1955 ; 83912. September 26, 1955 ;
- Jubilee Mills Ltd., The, Jivraj Tokarshi Road, Sewree, Bombay 15. 84341 and 84342. November 7, 1955 ;
- Kesoram Cotton Mills Ltd., 42, Garden Reach Road, Calcutta-24. 82927 and 82928. June 23, 1955 ; 84025. October 4, 1955 ; 84076. October 10, 1955 ; 84285. November 2, 1955 ;
- Khatau Makanji Spg. & Wvg. Co. Ltd., The, 6, Ballard Pier, Laxmi Building, Fort, Bombay. 82045, March 29, 1955 ; 82325. April 27, 1955 ; 82642. May 18, 1955 ; 84354. November 8, 1955 ;
- Mafatlal Fine Spg. & Wvg. Co. Ltd., The, of Navsari, Bombay. 80605 to 80611, 80614 to 80619 and 80621 to 80639. November 18, 1954 ; 81858 to 81860 and 81862. March 10, 1955 ; 82619 to 82632 and 82634 to 82636. May 18, 1955 ; 82825. June 13, 1955 ; 83846. September 2, 1955 ;
- Modi Spg. & Wvg. Mills Co. Ltd., Modinagar, (U.P.). 83042. July 5, 1955 ;
- New Commercial Mills Co. Ltd., The, Naroda Road, Railwaypura Post, P.O. Box No. 1060. Ahmedabad. 80681. November 23, 1954 ; 80895. June 20, 1955 ; 84141. October 17, 1955 ;
- New India Rayon Mills Co. Ltd., The, P.B. No. 6302, Lower Parel, Bombay-13. 83372. August 4, 1955 ;
- New Shorrock Spg. & Mfg. Co. Ltd., The, Nadiad, Dist. Kaira, Bombay. 82959 to 82961. June 25, 1955 ; 84433 and 84434. November 15, 1955 ;
- Panalal Silk Mills Ltd., Atlas Mills Compound, Reay Road, Mazgaon, Bombay-10. 81791. March 4, 1955 ;
- Phoenix Mills Ltd., The, Imperial Bank Building, Bank Street, Fort, Bombay. 80927. December 13, 1954 ; 81981, 81983 and 81994. March 23, 1955 ; 82489. May 9, 1955 ;
- Shantilal Bechardas Patel, Prop. Vikram Industries, 167, Bhavani Shankar Road, Dadar, Bombay 28. 80967. December 16, 1954 ;
- Silver Cotton Mills Co. Ltd., The, Near Jagnath Mahadev, Kankaria Road, Post Box No. 27, Ahmedabad. 83189. July 19, 1955 ;
- Somchand Hargovandas Shah, R/705-15, Rangwala Market, Railwaypura, Ahmedabad-2. 83131. July 13, 1955 ;
- Standard Mills Co. Ltd., The, 29, Veer Nariman Road, Fort, Bombay. 82969 and 82970. June 27, 1955 ; 83380 and 83881. August 6, 1955 ;
- Shree Niwas Cotton Mills Ltd., The, Delisle Road, Bombay-13. 82667. May 21, 1955 ;
- Sri Krishna Spg. & Wvg. Mills Ltd., Chickpet, Post Box No. 524, Bangalore-2. 82349. April 28, 1951 ; 82791. June 6, 1955 ; 83888. September 22, 1955 ;
- Victoria Mills Limited, The, De Lisle Road, Parel, Bombay 13. 82153. April 6, 1955 ; 82724. May, 28, 1955 ; 82951. June 24, 1955 ; 83063. July 7, 1955 ;

PART VI.

Special Proceedings (Designs), 1954 and 1955.

A :—Extension of Copyright in Designs under Sections 47 (2) and 47 (3) of the Indian Patents and Designs Act, 1911.

Design No.	Class No.	Date up to which the copyright has been extended.
68712 to 68713	4	29th February 1959.
68848 to 68851	13	10th May 1959.
68863 and 68864	13	18th May 1959.
68899	13	14th June 1959.
68951	13	23rd August, 1959.
69018 to 69022	13	19th October, 1959.
69166	1	31st January, 1960.
69175 to 69178	13	14th February, 1960.
69182	3	17th February, 1960.
69205	1	23rd March, 1960.
69521	3	9th October, 1960.
69528 to 69535	3	27th April, 1960.
69565	12	28th November, 1960.
69807	1	13th May, 1961.
69853 and 69854	3	2nd March, 1961.
70644, 70645, 70946, 70947, 70956	13	4th January, 1959
70969	4	5th January, 1959.
70964 and 70967	13	7th January, 1959.
70980	13	17th January, 1959.
70983	1	18th January, 1959.
70984	3	18th January, 1959.
70994, 70995, 70996	13	24th January, 1959.
71001	13	25th January, 1959.
71004	1	27th January, 1959.
71005, 71006, 71007	13	31st January, 1959,
71041 and 71042	13	18th February, 1959.
71044	13	19th February, 1959.
71054 and 71055	13	22nd February, 1959.
71059 to 71065	1	24th February, 1959.
71066	13	24th February, 1959.
71084	3	9th March, 1959
71097	13	21st March, 1959.
71105	13	25th March, 1959.
71119	13	29th March, 1959.
71128	13	29th March, 1959.
71132	13	30th March, 1959.
71165	3	6th April, 1959
71168	13	7th April, 1959
71186	13	18th April, 1959.

Design No.	Class No.	Date up to which the copyright has been extended.
71193	13	19th April, 1959
71195	13	20th April, 1959.
71216	3	25th April, 1959.
71233	13	3rd May, 1959.
71234	13	4th May, 1959.
71251 and 71252	1	16th May, 1959.
71302	5	18th June, 1959.
71318 and 71320	13	25th June, 1959.
71351	1	5th May, 1959.
71353	13	29th June, 1959
71361 and 71362	3	30th June, 1959.
71401 to 71404	13	22nd July, 1959
71417	13	25th July, 1959.
71441	13	6th August, 1959
71450, 71456, 71460, 71463, 71467, 71468	13	8th August, 1959.
71469	14	8th August, 1959.
71470, 71471, 71473, 71479, 71480	13	8th August, 1959.
71482 to 71485	1	8th August, 1959.
71488 and 71489	13	11th August, 1959.
71497 and 71498	13	18th August, 1959.
71511 and 71514	13	22nd August, 1959.
71519	3	25th August, 1959.
71524	1	30th August, 1959.
71547	13	23rd September, 1959.
71568 and 71569	1	10th October, 1959.
71580	3	24th October, 1959.
71588	14	26th October, 1959
71589 and 71590	13	26th October, 1959.
71600	1	1st November, 1959.
71656	1	19th November, 1959.
71637	14	28th November, 1959.
71668 to 71670	13	28th November, 1959.
71722	4	9th December, 1959.
71758	4	21st June, 1959.
71764 and 71765	4	27th December, 1959.
71857	4	5th January, 1960.
71860, 71861, 71862	1	5th January, 1960.
71868	13	10th January, 1960.
71880	1	19th January, 1960.
71882	13	21st January, 1960.
71898	3	2nd February, 1960.
71924	3	7th February, 1960.
71938	3	14th February, 1960.
71942	4	20th February, 1960.
71981	13	11th February, 1960.
71993 to 72001	13	23rd March, 1960.
72059	1	23rd December, 1959.

Design No.	Class No.	Date up to which the copyright has been extended.
72062	13	10th April, 1960.
72063	13	11th April, 1960.
72065, 72066, 72067	1	11th April, 1960.
72381	1	12th January, 1960.
72444	4	18th May, 1960.
72446 and 72447	1	20th May, 1960.
72454	13	26th May, 1960.
72621 and 72622	1	1st June, 1960.
72639	1	5th June, 1960.
72643	1	7th June, 1960.
72655 and 72656	4	4th January, 1960.
72657	13	10th January, 1960.
72661	3	12th June, 1960.
72695	3	29th June, 1960.
72717 to 72719	4	6th July, 1960.
72760	1	25th July, 1960.
72766	3	27th July, 1960.
72824	1	21st August, 1960.
72826	13	26th August, 1960.
72850 to 72871	13	6th September, 1960.
72875	3	7th September, 1960.
72876	10	7th September, 1960.
72886	3	26th September, 1960.
72913 and 72914	3	30th September, 1960.
72915 to 72921	13	30th September, 1960.
72930	1	16th October, 1960.
72931	4	16th October, 1960.
72961 to 72963, 72967, 72969, 72970, 72983	13	21st October 1960.
72994 and 72995	14	2nd November 1960.
72996 and 72997	13	2nd November 1960.
73011 and 73012, 73013, 73014	13	11th November 1960.
73055	1	13th December 1960.
73066 and 73067, 73068, 73069, 73070	13	14th December 1960.
73071	14	14th December 1960.
73137	5	15th January 1961.
73318 and 73319	3	8th November 1960.
73388	5	9th April 1961.
73390	1	9th April 1961.
73494	4	25th May 1966.
73930 and 73931	1	7th December 1966
77643	3	11th December 1968.
77644	1	11th December 1968.
77980	1	15th January 1969.
77981	3	15th January 1969.
80301	1	21st October 1964.
80434	1	6th November 1969.

Design No.	Class No.	Date up to which the copyright has been extended.
81017	1	20th December 1969.
81044	3	24th December 1969.
81045	1	24th December 1969.
82060	1	30th March 1970.
82061	3	30th March 1970.
82511	1	10th May 1970.
83271 and 83272	1	27th July 1970.

State Designs.

Baroda Designs Nos. 153-154 . . .	IV	28th February 1959.
Travancore Designs Nos. XLII & XLIII	4	17th October 1959.
Cochin Design No. 1 of 1119 and 2 of 1119	4	12th August 1959.
Mysore Designs Nos. 45 of 1944-45 and 46 of 1944-45	4	29th February 1959.

B.—Registration of Assignments, Licences, etc.

Assignments, Licences or other transactions affecting the interest of the original proprietors have been registered in respect of the designs bearing the following registration numbers. The number of each design is followed by the names of the applicants for registration.

Design No.	Name of the Registered Proprietor.
71059, 71060, 71061, 71062, 71063, 71064, 71065	Electrically Lighted Advertising Pillars Ltd.
71764 and 71765	Group Laboratories (India) Ltd.
71857	Richard Hudnut.
71880	General Motors Corporation.
72065, 72066, 72067	Malik Gobind Ram.
73197, 73198, 73199, 73412	Daily Milap.
75096	Hermorion Limited.
75525 and 75526	International Franchises Limited.
77296	Clamfit Products Limited.
77534	Abdul Aziz Hazi Ahmed and Abu Baker Ahmed.
77940	H. N. Sharma.
78426	The Delhi Cloth & General Mills Co., Ltd.
78869 and 78870	Olympia Werke Aktiengesellschaft.
78893 and 78894	Graetz Aktiengesellschaft.
79158	Alakapuri Trading Co., Ltd.

Cancellation of the Registration of Designs.

Design No.	Name of the Registered Proprietor.	Results.
74714	Sewa Singh	The registration of the design has been cancelled.
74876	Amritsar Kohlu Factory.	The application for cancellation of the Registration of design has been dismissed
75886	Mode Spg. & Wvg. Mills Co., Ltd.	The Registration of the design has been cancelled.
75931	Radhakishan and Harbanslal	The registration of the design has been cancelled.
77839	Ashok Glass Works	Withdrawn
78182	Messrs. Ellora Art Industries	Withdrawn
78183	Messrs. Ellora Art Industries	Withdrawn
78184	Messrs. Ellora Art Industries	Withdrawn
78477	Ashok Glass Works	Withdrawn
78555	Ashok Glass Works	Withdrawn
78784	Ashok Glass Works	Withdrawn
78834	Ashok Glass Works	Withdrawn
78838	Ashok Glass Works	Withdrawn
78839	Ashok Glass Works	Withdrawn
79467	Abul Khare	Pending
79468	Abul Khare	Pending
79518	The Asarwa Mills Limited	Pending
80471	Murari Engineering Works	The registration of the design has been cancelled.
80958	Messrs. Victoria Glass Works Ltd.	Withdrawn
81680	Messrs. Hindustan Plastics Ltd.	Pending
81681	Messrs. Hindustan Plastics Ltd.	Pending
82847	The New Commercial Mills Co. Ltd.	Pending
83713	B. V. Aswathaiah and Sons.	Pending

Correction of Clerical errors under Section 62 :—

73814, 79001.

PART VII.

Name Index (Patents), 1952-1954.

Name Index of Applicants for Patents in connection with Applications filed during 1952-1954.

Names.	Register Numbers.	Names.	Register Numbers.
A		A—contd.	
Abbott Laboratories	49806, 50877, 53123, 53124	Air Products Incorporated	50062
Abbott Machine Co., Inc.	50844	Air Reduction Co., Inc.	51969
Abdulla, S.	47649	Akasaka, I.	50532
Abdullah, Syed	49134, 49189, 49271	Aktiebolaget A. Ekstroms Mas- kinaffar.	51113
AB Ferrosan	47675, 47676	Aktiebolaget Akets Styckebruk	46826
Abildgaard-Elling, K.	49011, 49652, 49714, 50162, 50393, 51199, 52064, 52065, 52293, 53102	Aktiebolaget Bofors	48344, 50476, 53064
Abitibi Power and Paper Co., Ltd.	51179	Aktiebolaget Bonthron & Ewing	48191
Abplanalp, R. H.	50378	Aktiebolaget Innovator	53141
AB Tudor	47394, 47623, 51148, 51472	Aktiebolaget Pharmacia	53352
Acharya, V. S.	50728	Aktiebolaget Pluria	48723
Achaya, K. T.	48934, 51816	Aktiebolaget Radius	50012
Acheson, H. J.	48821	Aktiebolaget Scania-Vabis	53416
Acro (Engineers) Ltd.	50305, 51769, 51808	Aktiebolaget Separator	47428, 48525, 48879, 51619, 51645, 51646
Acton Bolt Ltd.	47477	Aktiebolaget Statens Skogsindus- trier	52489
Addicks, J.H.	50600	Aktiebolaget Svenska Flaktfab- riken	49086, 50350, 53177
Addison & Co., Ltd.	51418	Aktiebolaget Svenska Kullager- fabriken	46892
Adhikary, R.K.	49315	Aktiebolaget Svenska Metallver- ken	51858
Adrema Limited	50788	Aktiengesellschaft Fur Papier-Und Burobedarf	51253
Adrema Maschinenbau, G.m.b.H.	47181, 47182, 47296, 47297, 47298, 48114	Aktiengesellschaft Oederln & Cie	47206
Aerocem Limited	49963, 50753, 52549	Alabaster, R.I.H.	50480
Aerosol Corporation T.R.	53155	Aladdin Industries Ltd.	47022, 47023, 48416, 52809
African Teaholdings Ltd.	51690	Alladdin Industries Incorporated	49020
A, Friedr, Flender & Co.	48826	Alan Muntz & Co., Ltd.	46926, 48532, 48570, 48613, 51091
Aga, N.M.	52498	Alarakhiabbay, Abdul Rasul H.	47352
Agarwala, Kamal Kishore	51962	Albert David Ltd.	46731, 46767, 46797, 48770, 48771, 48839, 49580, 49581, 49798, 50925, 51175, 51208
Agarwalla, L.	53073	Albion Motors Ltd.	47135, 47885, 48881, 49074, 51688
Agarwalla N.D.	48118, 50855	Albright & Wilson Ltd.	52487, 53216, 53217
Agarwal, S.P.	52940	Alden, P.P.	47796
Agerwala, P.M.	46732, 51970	Alembic Chemical Works Co., Ltd.	47378, 47379, 53455
Aggarwal, R.P.	50048	Alembic Glass Industries Ltd.	48141, 48528
Agnew, E.A.	49396	Alexander, G.	50021
A.H.Hunt (Capacitors) Ltd.	52419, 52420		
Ahmad, M.N.	49402		
Ahmedabad Textile Industry's Research Association, The	49405		
Ahura Industries	48054, 48246		
Airflo (N'cle) Pty., Ltd.	53174		

Names.	Register Numbers.	Names.	Register Numbers.
<i>A—contd.</i>		<i>A—contd.</i>	
Alexander Smith Incorporated.	52171	American Flange & Manufacturing Co., Inc.	48867, 49506, 50572, 52299, 53461
Algemeene Kunstvezel-Maatschappij Nammalooze Venootschap.	48855, 53278	American Home Products Corporation.	48314, 49094, 49225, 49612, 49665, 50089, 50449, 50713, 53211, 53366
Algemene Kunstzijde Unie N. V.	47566, 49292, 51793	American Patents Corporation.	46608, 46655, 47200, 49383, 49501
Allard, P.J.M.T.	51621	American Steel Foundries.	51289, 51290, 53325
Allbery, V.	48003	Ames Irrigation Pty, Limited.	49958
Allen, A.A.	47453	Amin Brothers.	50395
Allen & Handburys Ltd.	48827, 51134, 52982, 53100, 53107, 53328	Amirali, I.	51174
Allen West and Company Limited	49237, 52661,	Amrit Banaspati Co., Ltd.	51783
Allied Agricultural Impliments.	48357	Amritlal, P.R.R. Mrs.	52924
Allied Ironfounders Limited	46969, 48540, 49444	Amritlal, R.	52924
Allied Laboratories, Inc.	53120	Ananya Om Prakash.	51953
Allinquant, F.S.	53181	Anderson, S.	51885
Allis-Chalmers Manufacturing Company.	48031, 48032	Ando, K.	47818
Allmanna Svenska Elektriska Aktiebolaget.	50637, 53221	Ando, S.	50043
Altschuler, A.	51496	Andre Rubber Company, Ltd.	51078, 51474, 51578, 51955, 52911
Alucrete Constructions, Ltd.	46735	Andrews, H.C.	49139*
Aluminium Laboratories, Ltd.	48850, 48851, 49026, 49484, 49632, 50518	Anglo-Iranian Oil Company Ltd.	47224, 48099, 49572
Aluminium Manufacturing Company Limited, The	52841	Anglo-Scotish Creameries, Ltd.	49994, 51780
Alweg-Forschung Gesellschaft Mit Beschränkter Haftung	49263, 49566, 50767, 50768, 51343, 51366	Anil Starch Products Ltd, The	47558
Amal Limited.	58105	Ansbacher, F.	51273
Ambaswamy, M.D.	48654, 48655, 51256	Anstalt Fuer Montage-Techni.	51801
Ameliorair.	52280	Anstalt Fur Die Entwicklung Von Erfindungen Und Gewerblichen Anwendungen "Energä."	46919, 46920, 46937, 48235, 48747, 50786, 51233
American Car and Foundry Company.	46671, 46720	Anthony, D.G.P.	48151
American Chemical Paint Company.	49302, 50490, 50556, 50885, 50892	Anzin Limited	52916, 52963
American Cyanamid Company.	46460, 46461, 46496, 46587, 46643, 46646, 46728, 46773, 46774, 46804, 46805, 46976, 47036, 47130, 47131, 47174, 47197, 47255, 47315, 47389, 47578, 47579, 47621, 47660, 47849, 47850, 48002, 48434, 48507, 48508, 48577, 48627, 48701, 48702, 48703, 48860, 48861, 48976, 49162, 49319, 49470, 49475, 49570, 49951, 50044, 50045, 50060, 50183, 50220, 50692, 50714, 50848, 50849, 51300, 51412, 51682, 51692, 51712, 52035, 52203, 52680, 52730, 52803, 53012, 53108	A.P.V. Company Limited, The	47589, 52866, 52867
		Arakie, B.A.	49282, 51237
		Araneta, Vicente A.	51644
		Arens Controls Limited	52996
		A. Reyrolle and Co., Ltd,	51303, 53054, 53061, 53354
		Aria, N.A.	49356
		Armco International Corporation, The	47868
		Armstrong Cork Company	50088, 52216
		Armstrong Siddeley Motors, Limited.	46744
		Armstrong's Patents Co., Ltd.	47245, 49653, 50278, 50279, 50570
		Arnold, C.L.	47006
		Aronovsky, S.I.	46638
		Arrault, J.D.	51706

Names.	Register Numbers.	Names.	Register Numbers.
<i>A—contd.</i>		<i>A—concl'd.</i>	
Artbangle, Limited	48132, 48572, 52393	48909, 48910, 48911, 48912, 48913, 48914, 49111, 49112,	
Arthur, E.M.	47363	49113, 49294, 49528, 49588,	
Arvey Corporation 48743, 48744, 49549, 49550, 49759		49830, 50017, 50934, 51478, 51702, 52118, 52182, 52183,	
Asahi Chemical Industry Co., Ltd. The	48588, 52725	52266, 52278, 52279, 52458, 52459, 52812, 52813, 52908, 53080, 53207	
Asahi Garasu Kabushiki Kaisha. 52610, 52611, 52612, 52613, 52614		Automatic Totalisators Limited. 46639, 51866	
Asar, D.P. Mr.	52938, 52939	Automotive Products Company Limited.	46489, 46753, 46754
Asar, V.P.	51803	Autoseam (Overseas) Limited.	49107
Aschaffenburg Zellstoffwerke Aktiengesellschaft.	52695, 52696, 52703, 52714	Auto Transmissions Limited.	47795, 51272
A/S Chr. Fabers Fabriker.	50535	Avery Company Limited. The	50787
Ashley Accessories Ltd.	47191, 49419, 50135, 51401		
Ashton, F.	49257		
Ashurst, T.	51797		
Ashworth Ross & Company Limited. 48113			
Asiatic Oxygen & Acetylene Co., Ltd. The	53058		
Asplund, A.J.A.	46928, 47550		
Associated Ethyl Company Limited. The	48863		
Associated Pipe Company (Proprietary) Limited.	49317		
Asta-Werk Aktiengesellschaft.	51659		
Ateliers De La Motobecane.	47480, 51862, 52007, 52008, 52223, 52237, 52238, 52859, 53062		
Ateliers Neyret-Beylier Et Piccard- Pictet Etablissements-Neyrpic.	48806		
Athar, S. Dr.	51125		
Atkinson's Agricultural Appliances Limited.	49236, 52015, 52692		
Atlantic Engineering Company. 47801, 48959			
Atlantic Investment Company (Montevideo) S.A.	53152		
Atma Nand	48373		
Atmospheric Control Limited.	51890		
Atomic Energy of Canada, Ltd.	50603		
Aubanel, J.E.	50480		
Aubert, J.	50989		
Auergesellschaft Aktiengesellschaft August, P.	52961 48637		
Austin Crompton Prakinson Electric Vehicles Limited.	51365		
Austria Tabakwerke Aktiengesel- lschaft, Vorm.	48727		
Automatic Telephone & Electric Company Limited.	46549, 46550, 46551, 46943, 47475, 47476, 47859, 48077, 48078, 48079, 48448, 48509, 48787, 48805,		
		Babcock & Wilcox Limited.	46833, 48970, 49104, 49118, 49239, 49647, 50116, 50595, 50826, 51055, 51162, 51606, 52471, 52513
		Backie, J.L.	46718
		Badin, F.	52929
		Badische Anilin & Soda-Fabrik (I.G. Farbenindustrie Aktiengesel- lschaft "In auflosung").	48793
		Badische Anilin-& Soda-Fabrik Ak- tiengesellschaft.. . . .	50134
		Badsha, F.J.	52217
		Baert, R.	51000
		Bagchi, J.N. Dr.	47808
		Bagon, A.	49434
		Bahl, R. Mrs.	47656
		Bahnsen Company, The	47897
		Bajaj Brothers	50930
		Baker, A.L.L.	52607
		Baker, M.M.	51733
		Baker Oil Tools, Inc.	48556
		Baker Platinum Limited.	49224, 49928,
		Balakrishnan, B.R.	50673, 50674, 50888, 51379, 51716
		Balasundaram, S.	52219
		Bamford & Evershed Limited.	49386
		Banerjee, B.	51628
		Banerjee, G.N.	53349, 53350
		Banerjee, S.K.	46795
		Banerji, S.K.	46611, 49288
		Bank of America National Trust & Savings Association.	46955
		Banks, S.E.	52655
		Bansal, A.N.	46975, 51538
		Baos, C.V.E. Dr.	51306
		Baranwal, D.P.	52457
		Barclay, R.J.	49327

Names.	Register Numbers.	Names.	Register Numbers.
B—contd.		B—contd.	
Baron, P.	47681	Berglein, A.O.	48665
Barros, A.J. De O.	47479, 49673	Bergmann, W.	50721
Barr, R.H.H.	47274	Bernier, E.D.O.	51542, 51668, 52358, 52753
Barth, C.	47338	Betonbau G.m.b.H.	49707
Bartrev Ltd.	51940	Bettoni, E.	48696
Barve, V.R.	46594, 47067, 47235, 47359, 47432, 49153, 51353	Beyer Peacock & Company Limited.	47546, 48399
Basu, D.P.	48040	Bezeada Metal and Steel Industries Limited, The	52321
Basu, Salil Kumar.	49829	B. F. Goodrich Company, The	49487, 51867, 51923, 52259
Basu, Sanat Kumar.	50341	Bhaduri, Adinath.	51813
Bata Shoe Company Limited.	51904	Bhagwat, K.S.	50293
Batfast Industries Works.	47271, 48150, 48488, 48515	Bhalerao, M.R.	52781, 52782, 52783
Batten, F.J.R.	48559	Bhangay, R.	50080
Batu.	49792, 49793	Bharade, B.S. Dr.	49681, 51673
Bauer, R.	48761	Bharat Carbon & Ribbon Mfg., Co., Ltd., The	53418
B. B. Chemical Co., Ltd.	49159, 52403, 52881	Bharati, J.V. Sm.	52817
Beard, C.G.	49899	Bharat Sheet Metal Industries Limited.	51751
Beards, B.M.	51222, 51252, 51709, 52389, 52390	Bhardwaj, B.M.S.	50881
Bechtler & Co.	50317	Bhargava, M.P.	48905, 51869
Bechtler, H.C.	48887, 50511	Bhargava, N.D.	47464
Bechtler, W.A.	50284	Bhargava, V.D.	46606
Bee, J.R.	50533	Bharucha, K.E.	48405
Beer, E.	47134	Bharucha, N.D.	46670, 48241, 52002, 52070
Behera, H.	47076, 47170, 47317	Bhathena, A.S.	47216, 47217, 48775, 48784
Behrens, W.H.R.	49385	Bhattacharji, R.N.	48838, 47066
Behringwerk Aktiengesellschaft.	52212	Bhaumik, S.C.	52502
Bell & Howell Company.	47291, 47335	Bhave, K.P.	51361
Bellezanne, J,	53427	Bhawanishanker, S.	2757
Bellier, J.	48210, 48417	Bhide, E.R.	50732
Bellirock Gypsum Industries Limited.	48900	Bhuleskhar, K.N.	48578
Belliss & Morcom Limited.	47582, 47757	Bhushan, B.	52338
Bell Punch Company Limited.	47706, 47707, 49007	Bigelow-Sanford Carpet Company, Inc.	47083
Bellometti, U.	51734	Biochemic Gesellschaft Mit De- schränkter Haftung.	49697
Benard, L.	50401	Birmingham Small Arms Company Limited, The	52179, 52564
Bencetti, E.	50056	Birmingham Sound Reproducers Limited.	47152
Benchemoul, N.R.	48050	Biro, L.J.	51169
Bendick Paul Limited.	52909	Biro Swan Limited.	48121
Benedek, O.	48745, 48746	Bishop David Freeman Co.	51423
Benger's Limited.	51304	Bishop, E.H.	51989
Benjamin Electric Limited, The	49646, 51523, 51686, 51798	Biswas, A.C.	50180
Bennett, J.C.	53057	Biswas, R.K.	51427, 51509
Benteler-Werke Aktiengesellschaft.	49157, 49158		
Bentley, H.	49720		
Bercovitz, B.	50800		
Bergerhoff, H.	52992		

Names.	Register Numbers.	Names.	Register Numbers.
B—contd.		B—contd.	
Blackburn and General Aircraft Limited.	49585, 49586, 49587	Brave, V.R.	46594
Bleachers' Association Ltd.	49455	Breards, B.M.	51252
Blench, R.O.	46745	Bremer, R.C.	52078
Bloom, F.T.	49072, 49073	Brentford Electric Ltd.	53205
Blumfield, C.V.	48289	Brentford Transformers Limited.	53094, 53396
Blum, J.	53364	Breuning, E. Dr. Ing.	48410, 49738
Bobkowiez, E.	49883, 49884, 49885	Brezina, J.	50143
Bock, F.	50161, 52745	Briggs, J.C.	53303
Bohme Fettchemie G.m.b.H.	50374	Bright, T.J.R.	53253, 53421
Bolindens Gruvaktiebolag	47172	Brisce, H.W.E.	49739
Bollin, H.	48665	Bristol & West Tar Distillers Limited	48149
Bolton, J.	53099	Bristol Laboratories Incorporated.	46505, 48503, 50910, 52497, 53241, 53457, 53458
Bamford & Evershed Limited.	49387, 49786, 50469	British Aluminium Company Limi- ted, The	47215, 47444
Booth, C.H.	48925, 50245	British Artificial Resin Co., Ltd.	51765
Boots Pure Drug Co., Ltd.	47367, 48827, 49198, 51251, 51331, 52372, 52373, 52578, 52579, 52605, 52686, 52765, 52802, 52864, 52865	British Bata Shoe Company Limi- ted, The	46845, 52625
Bopp and Reuther G.m.b.H.	51173	British Celanese Limited.	48641, 50205, 51327, 51694, 53357
Borax Consolidated Limited	48309, 48566, 48567, 50150	British Cellophane Ltd.	51048, 51077, 51081, 51135, 51339
Borden Company, The	47035	British Cotton Industry Research Association, The	48319, 49750, 49751, 49752, 49948
Borevic, N.	48137	British Dielectric Research Limited.	47332
Borua, Profulla Chandra.	51258	British Drug Houses Ltd., The	47406, 47980, 48111, 48827, 49821, 52649, 52944
Bose, C.R.	47310	British Electricon (London), Limited.	49069
Bose, Nilratan.	49859, 50875	British Electric Traction Company Limited, The	51759
Bossong/Werk G.m.b.H.	48332	British Federal Welderand Machine Co., Ltd.	49677
Boue, J.	47551	British Fibrak Separator Company Limited.	50148, 50141
Bouillante-Linet, J.A.	48822	British Filters Limited.	52646
Bouvard, M.	48753	British Glues and Chemical Limited.	49187, 49188
Boving & Company Limited.	49327	British Insulated Callender's Cables Limited.	46586, 46673, 46785, 46839, 46930, 46931, 46949, 46962, 47415, 47924, 48223, 48935, 49406, 49458, 49503, 49556, 49743, 50019, 50058, 50115, 50566, 50851, 51154, 51244, 51318, 51552, 51560, 51665, 51696, 52096, 52114, 52303, 52362, 52423, 52515, 52967, 52968, 53031, 53115, 53254, 53356, 53403, 53445
Bowaters Development and Re- search Limited.	51667, 52806, 53039, 53083, 53106, 53126, 53127	British Insulated Callenders Cons- truction Co., Ltd.	50316
Bowden (Engineers) Limited.	47499, 49565	British Iron and Steel Research Association, The	46853, 48501, 51399
Boxfoldia Limited.	46876, 46877		
Boyce, R.D.	50679, 52637		
Bradford Dyers' Association Limi- ted, The	47306, 49747, 49748, 50865, 52487, 52508		
Braithwaite & Company (India) Limited.	47438		
Braria, G.S.	52103		
Brassington, J.E.	49376		
Braunkohlen und Brikettwerke Roddergrube Aktiengesellschaft.	48007		
Braunschweigische Maschinenbauan- stalt Aktiengesellschaft.	49384		
Braunstein, E.	48815		

Names.	Register Numbers.	Names.	Register Numbers.
B—contd.		B—concl.	
British Intercontinental Corporation.	47431	Brydan, J.	53335
British Moulded Plastics Limited. .	51498	Bryden, J.	47688
British Nylon Spinner Limited. .	53056	Buchanan, D.	47876
British Periclast Company Limited, The	53395	Buckingham, R. J. E.	48411
British Rayon Research Association, The	50706	Buffalo Electro-Chemical Company Inc.	48414, 48608, 50400
British Reinforced Concrete En- gineering Company Limited. .	52517	Bugan, A.	51030
British Resin Products Limited.	47852, 47853	Buhrer, E.	48956, 48957, 50352
British Ropes Limited.	51815, 52785	Bumba, V.	48769, 49394
British Steel piling Company Limi- ted, The	48920	Bundy Tubing Company.	47965, 47966, 47967, 47993, 47994, 51150, 53180
British Sugar Corporation Limited.	52095	Burda, Z. M.	46974, 47194
British Tabulating Machine Com- pany Limited, The	46924, 47173, 49279, 50520, 51622, 51950, 51951, 51952	Burgerspital Vassel.	53338
British Telecommunications Re- search Limited.	46768, 46769, 47280, 47326, 47607, 47753, 47754, 47755, 47756, 48123, 48480, 48489, 48490, 48653, 48695, 49241, 49496, 49625, 49626, 49627, 49628, 49629, 50147, 50560, 50624, 50799, 50834, 50835, 50836, 50837, 50838, 51764, 52250, 52410, 52411, 52412, 52543, 52685, 52713, 52723, 52854, 52855	Burn & Company Limited.	46875
British Thomson-Houston Company Limited, The	46476, 46593., 46661, 47188, 47284, 47590, 47731, 47918, 48463, 48464, 49331, 49717, 50092, 50201, 50221, 50260, 50432, 50516, 50694, 50778, 52138, 53277, 53359,	Burndept Limited.	49149
British Timken Ltd.	47309, 48398 48673, 49611, 50618	Burrington, H. W.	46874, 46965, 47683, 48616, 48649, 49417, 49427, 49428, 49429, 49430, 49431, 50668, 51183, 51207, 51254, 51461
British United Shoe Machinery Company, Ltd., The	47212, 47277, 47744, 48336, 48568, 49757, 49758, 49787, 53225	Burstall, F. H.	48810
Broadbent, R.	48076	Burstlein, E.	49459
Brookhirst Switchgear Limited.	47937, 52533	Burstlein, E. M.	50991
Brooksbank W. R.	52926, 52927, 52978	Butcher, N. E.	52959
Brooks, G.	49981	Buxi, A. S.	53060
Broom & Wade Limited.	49897	Buxy, Satyen	51029
Brown and Root, Inc.	51850	Byk-Gulden Lomberg Chemische Fabrik G.m.b.H.	50375
Brown, C. L. M.	52638	Bysakh, B.	48053
Bruckbauer, H.	50056	C	
Brugger, A.	51040	Cable Belt Limited.	49082, 49409
Brunck, U.	49642	Cable Covers Limited.	52131
Brush Electrical Engineering Com- pany Limited, The	51072	Cable Makers Australia Proprietary Ltd.	52858
Bruun, O. J.	52807	Caillol, J. L. R.	52055
		Calcutta Plastic Works	47889
		Calderwood, W. J.	51489
		California Research Corporation.	50612
		Calistri, R.	51570
		Calor-Emag Elektrizitats-Aktien- gesellschaft.	46902, 50298
		Caltex (India) Limited	48804
		Calument and Hecla, Inc.	51484, 52797
		Camphausen, F. H.	49323
		Canadian Airborne Geophysics Limited.	52622
		Canadian General Electric Company Ltd., The	50373

Names.	Register Numbers.	Names.	Register Numbers.
C—contd.		C—contd.	
Cannac Research and Development Company	51235	Cementation Company Limited, The	52969
C. A. Parsons & Company Limi- ted.	46500, 46807, 46808, 46809, 48065, 48110, 48215, 48592, 48593, 48594, 48595, 49170, 49171, 49437, 49438, 49669, 49709, 49746, 49811, 50857, 50942, 51321, 51469	Centrax Power Units Limited	47274
Capps, A. W. F.	47407	Centre National De La Recherche Scientifique	47053
Capps, M. W. R.	47407	Centro Informazioni Studi Ed Es- perienze (C. I. S. E.) Societa Responsibilita Limitata	49962
Capps, N. C.	47407	C. F. Boehringer & Soehne G.m. b.H.	48943
Carbodies Limited	49016, 49229, 49938, 49982, 50697	Central Tractor Organisation, New Delhi, Chairman,	53024
Carborundum Co., Ltd., The	48456, 51786	Chakraborty, Ashesh	48639
Carborundum Co., The	49186, 49199	Chakradeo, L. M.	48443, 48754
49202, 49344, 49377, 49464, 49608, 49615, 49616, 49649, 49700, 49708.		Chakradeo, M. L.	48443
Carding Specialists (Canada), Limited	52774	Chakradeo, P. C.	48443
Cargill, H. S.	46800	Chakradeo, P. L.	48443
Carleton, W. J.	46556	Chakradeo, S. L.	48443
Carlo Erba S. P. A.	46609, 46610, 46764, 49276, 49286, 49617, 50669	Chakravarti, S. K.	49363
Caroline Elisabeth,—Stiftung	50856 52287	Chakraverty, K.	48669
Carroll, W. C.	46696, 46697, 46698	Chakraverty, N.	52117
Cary, J. E.	52698	Chamaria, G. B.	47247
Cary, V.	52698	Chamberlain Industries Limited	52312
Casablancas High Draft Company Ltd.	46699, 47764, 47949, 48335, 48808, 48866, 49156, 50904, 50905, 50973, 51778	Chamberlain, W. E.	46733
Casanovas, J. M. S.	48517	Chambon Limited	47461, 50573, 53296
Casati, G.	46637, 47568	Champion, C. B.	49862
Cassella Farbwerke Mainkur	46933	Champion Paper Company Ltd., The	57111
Cassella Farbwerke Mainkur Akti- engesellschaft	50227, 52328	Chanda, M.	48186, 48187
Caton, G.	48264	Chander, M.	53167, 53168
Cattaneo, E.	49123	Chand, G.	48799
Cavitron, Corp.	47495	Chand, H.	51019
C. A. V. Limited.	52933, 53307	Chandra, R.	47938
Cazzaniga, C.	46637, 47568	Chari, T. L.	48221, 48222
C. J. Wakefield & Company Limited. 51092, 52724	47097, 51092, 52724	Charles E. Forest & Co.	49133
C. D. Patents Limited	48849, 49150, 50133	Charrington, Gardner, Locket & Company Limited	50494
Celulmoex, S. A.	50775	Chas. Pfizer & Co. Inc.	47050
		47233, 47639, 47684, 50101, 50437, 50785, 51293, 51558, 52079, 52222, 52324, 52914, 53067, 53358, 53397, 53402	
		Chas Southwell & Co. Limited	48082
		Chatterjee, B.	46723
		Chatterjee, B. G.	47715
		Chatterjee, G. S.	52997
		Chatterjee, Jnan Saran	49664
		Chatterjee, K.	48622
		Chatterjee, S. N.	50165
		Chatterjee, B.	50954, 52537

Names.	Register Numbers.	Names.	Register Numbers.
<i>C—contd.</i>		<i>C—contd.</i>	
Chaube, R. K.	47716	Christiansen, C. O.	47492
Chaudary, M. A.	47155,	Chubb and Son's Lock and Safe Company Ltd.	48230, 51941, 51978
47762, 48476, 48611, 48891, 49235, 49336, 50876, 51328, 52447, 53200		Church, G. T.	48495
Chaudhury, D. N.	47614, 47813	Churchill, H. W. S.	47163, 48991, 49452
Chemesche Fabrik Schweizerj all	49084, 49085	Churi, M. N.	51680
Chemical Construction Corporation	46644, 46647, 46648, 49060, 49131, 49457, 50470, 50471, 50472, 50473, 50658, 50715, 50923, 51684	Ciba Limited	46462, 46590, 46618, 46619, 46624, 46625, 46626, 46679, 46680, 46681, 46682, 46693, 46694, 46746, 46747, 46748, 46759, 46760, 46761, 46829, 46832, 46841, 46862, 46863, 46864, 46879, 46880, 46908, 47019, 47084, 47090, 47091, 47103, 47118, 47136, 47148, 47192, 47207, 47328, 47337, 47364, 47368, 47369, 47376, 47380, 47575, 47583, 47610, 47611, 47612, 47613, 47626, 47647, 47666, 47667, 47668, 47692, 47722, 47740, 47760, 47777, 47785, 47806, 47807, 47826, 47916, 47925, 47926, 47960, 47961, 47989, 47990, 47997, 48037, 48107, 48138, 48139, 48158, 48170, 48171, 48176, 48183, 48277, 48278, 48292, 48408, 48458, 48469, 48493, 48500, 48534, 48535, 48558, 48631, 48638, 48676, 48713, 48714, 48715, 48733, 48752, 48823, 48824, 48825, 48846, 48865, 48918, 49019, 49049, 49050, 49051, 49151, 49152, 49164, 49184, 49204, 49205, 49206, 49207, 49208, 49268, 49287, 49295, 49328, 49329, 49347, 49422, 49440, 49448, 49499, 49500, 49535, 49536, 49542, 49543, 49545, 49553, 49633, 49644, 49645, 49755, 49795, 49801, 49802, 49803, 49941, 49960, 50015, 50016, 50065, 50096, 50120, 50137, 50138, 50151, 50178, 50191, 50216, 50251, 50252, 50255, 50259, 50272, 50273, 50287, 50295, 50329, 50330, 50343, 50351, 50361, 50362, 50389, 50391, 50392, 50410, 50411, 50412, 50413, 50414, 50416, 50431, 50513, 50562, 50622, 50662, 50700, 50701, 50710, 50711, 50757, 50861, 50896, 50912, 50984, 50985, 51001, 51002, 51039, 51060, 51063, 51187, 51220, 51221, 51260, 51261, 51262, 51285, 51333, 51334, 51335, 51341, 51389, 51446, 51447, 51467, 51490, 51491, 51492, 51493, 51494, 51508, 51516, 51518,
Chemie Grunenthal G. M. B. H.	50026, 50154		
Chemiewerk Homburg, Aktien- gesellschaft	53218		
Cheney, C. W.	47362, 48766, 48872, 49421, 53283		
Chen, H.	51345		
Cherian, P. P.	49172		
Chesa, J. S. M.	51796		
Chesterfield Tube Company, The	49956		
Chetty, A. K. P.	50549		
Chhotelall	47599		
Chicago Bridge & Iron Company	51136		
Chicago Pump Company,	46484, 46907		
Chicopee Manufacturing Corpora- tion	46660		
Chiksan Company	52083		
Children's Cancer Research Foundation, Inc.	48688		
CHINOIN Gyogyszer-es Vegyes- zeti Termekek Gyara R. T. (Dr. Kereszty-es Dr.-Wolf)	48962, 48977, 50368, 53179		
Chipalkatti, V. B. Dr.	46486, 49756, 50771, 52325, 52344		
Chitale, M. V.	51886		
Chitgupi, B. B.	51704		
Chloride Electrical Storage Co., Ltd., The	49892, 49921, 50300, 50301, 51367, 51368, 51369, 52442, 52443, 53293		
Chopra, H. D.	51177, 51178		
Choudhury, Pijush Kanti, Dr.	51887		
Choudhury, P. N.	47055, 51025		
Choudhury, J. K.	52814		
Choudhury, S. N.	47162		
Chouhan, R. R.	51312		
Chowdhury, V. N.	52757		
Chowdhry, K. S. Sardar	46481, 46695		
Christiania Spigverk	47819, 51735		
Christiansen, C.	48027, 48028, 48029, 50037,		

Names.	Register Numbers.	Names.	Register Numbers.
C—contd.		C—contd.	
51520, 51521, 51522, 51547,		Columbia Ribbon and Carbon	
51584, 51614, 51636, 51699,		Manufacturing Company, Inc. .	52444,
51700, 51725, 51810, 51811,			52445
51824, 51834, 51856, 51864,		Comar, M.	51032
51865, 51866, 51944, 51980,		Combustion Engineering, Inc. .	49827
51981, 51982, 52030, 52066,		Combustion Engineering, Super-	
52067, 52068, 52094, 52127,		heater Inc.	47316,
52128, 52129, 52130, 52191,		47402, 47403, 47788, 47833	
52291, 52329, 52334, 52361,		Commercial Solvents Corporation .	53294
52382, 52397, 52417, 52434,		Commonwealth Engineering Co.,	
52450, 52465, 52466, 52485,		Limited	52058
52509, 52510, 52534, 52598,		Commonwealth Engineering Com-	
52599, 52600, 52601, 52624,		pany of Ohio, The	52987
52656, 52700, 52701, 52761,		Compagnie De caoutchoue Manu-	
52776, 52792, 52793, 52821,		facture "Dynamic", Societe	
52822, 52823, 52873, 52918,		Anonyme	48628
52950, 52958, 53007, 53045,		Compagnie Francaise Des Matieres	
53046, 53047, 53048, 53049,		Colorantes	51598, 51599,
53072, 53122, 53140, 53143,		51600, 51601, 52796, 53055,	53240
53186, 53187, 53266, 53280,		Compagnie Francaise Thomson-	
53281, 53282, 53295, 53454		Houston	47314
Cilag Limited	47032, 48803, 50575, 50576,	Compagnie Generale Des Con-	
	50577, 50613, 51140, 51171,	duites D'Eau	49896
	51172, 52485, 52606	Compagnie Generale De Tele-	
Cineteknik A. G.	51203	graphie Sans Fil	49911,
Cinquini, C.	50247	49916, 49924, 49931, 51456,	
Citgupe, B. B.	51704	52672, 52673, 52674, 52675	
Claeys, M.	48095, 48096,	Compagnie Internationale De	
	50589	Biochimie,	50169
Clarke, K. K. Mrs.	46631	Compagnie Internationale De	
Climax Rock Drill & Engineering		Procedes Electrolitiques Pour	
Works Limited, The	46475	Le Revetement Des Metaux	
Cluett, Peabody & Co., Inc. .	46558,	C. I. P.-E. R. M.	48481
	49504, 53273	Compagnie Internationale Des-	
Clyde Crane & Booth Limited .	47223	Pieux Armes Frankignoul Societe	
Clyde Rubber Works Company		Anonyme	48312,
Limited, The	48173, 50698	48313, 49435, 49436	
Coal Industry (Patents) Limited .	48446,	Compagnie Parisienne D' Outillage	
	48709, 49366, 52733, 53133	A Air Comprimg, Societe Ano-	
Coccon, M.	51426	nyne	53422,
Coconut Processes, Inc. . . .	49433		53423
Coffey, W. D.	51722	Compagnie Pour La Fabrication	
Colorete Limited	50666	Des Compteurs Et Material D'	
Coldair Limited	53065	Usines A Gaz	53092,
Coles, D. H.	49561		53265
Colgate -Palmolive Co. . . .	49096, 49648.	Comptoir Des Textiles Artificials	
	50207, 51212, 51213, 51329, 51748	S. A. R. L.	48671
Colgate-Palmolive-Peet Company .	47261,	Comptoir Industrial D' Etirage	
	48063, 48155, 48156, 48261,	Et Profilage De Metaux . . .	47669,
	48299, 49062	47730, 48026, 49342	
College of Engineering and Techno-		Conradty, C.	51108,
logy, Bengal	52814, 52997		51805
Collins, A. L.	53032	Conradty, E. K.	51108,
Colombo Commercial Company			51805
Limited, The	47290, 47688,	Conradty, M.	51108,
	53335		51805
Colquitt, O.	48242	Conradty, P.	51108,
			51805
26 Patent 57			44

Names.	Register Numbers.	Names.	Register Numbers.
C—contd.		C—concl.	
Consolidated Mining and Smelting Company of Canada Limited, The	49857, 49858	52705, 52706, 52707, 52708, 52709, 52710, 52711, 52798, 52799, 52801, 52834, 52835, 53195, 53196, 53197, 53198, 53199, 53270, 53319, 53347, 53348, 53369, 53372, 53390, 53414.	
Constantinesco, G.	52732	Courtaulds Limited	48894, 49846, 50244, 50384, 51460
Continental Cam Company Inc. 51758, 51762, 51763, 51931, 51932, 51933,	51757, 51947 51948	Coyne, A.	48210, 48417
Continental Oil Company	52377	Crawford & Company (Tottenham) Limited	50936
Contractor, E. N.	46515	Creed and Company Limited	47739, 47928, 50496, 50543, 50544, 50824, 50882, 50955, 51107, 51297, 51730, 51731, 52947, 53004, 53005, 53264, 53406, 53451, 53452, 53453.
Contractor, H. N.	51102	Creed Charles St. Clair	51962
Contractor, P. N.	50275	Crespi, G.	51224
Cookson, W.	50724	Crittall-Luxfer Limited	49823, 49869, 49870
Coopertief Aardappelmeel-Verkoop- bureau Der Vereenigde Boer- fabrieken	47482	Cromford Colour Company Limited	47409
Cooperatieve Verkoop-En Pro- ductievereniging Van Aardap- pelmeel En Derivaten "Avede" G. A.	48630, 51884, 52085	Crocker, D. E.	48442
Cooper Engineering Limited	47814	Crocker Laboratories Limited, The	48837
Cooper, J. M.	47823, 48045, 49820, 53308	C. U. R. A. Patents Limited	50734
Coops, J.	50979	Currie, O. J. O.	50370
Coote, H. E.	52430, 52677	Curry, R. S.	48619
Coplands, M.	48871	Cuthbertson, J. A.	48738, 48739
Coppee Company (Great Britain). Limited, The	47300	Cuvelier, P. A. I.	51943
Cordice-Roy, G. G. J.	51456	Cuvier, C. C. F.	53285
Cornish, H. E.	47537	Cvikl, E.	48981
Costley, G. R.	50219	C. W. Cheney and Son Limited	47362, 48766, 48872, 49421, 53283
Council of Scientific and Industrial Research	46575, 46576, 46713, 46714, 46793, 46794, 46857, 46945, 46946, 46947, 46981, 46994, 46995, 47179, 47264, 47347, 47348, 47382, 47401, 47439, 47446, 47468, 47580, 47597, 47766, 47802, 47815, 47816, 47817, 47902, 47982, 48275, 48342, 48385, 48419, 48499, 48529, 48530, 48640, 48667, 48719, 48873, 48923, 49022, 49033, 49054, 49234, 49285, 49353, 49355, 49364, 49425, 49441, 49510, 49524, 49555, 49590, 49635, 49729, 49815, 49836, 49837, 49838, 49839, 49851, 49852, 49880, 50067, 50122, 50173, 50339, 50340, 50483, 50574, 50758, 50782, 50803, 50804, 50805, 50806, 50863, 50864, 50872, 50873, 50874, 50926, 51026, 51084, 51189, 51201, 51250, 51524, 51525, 51575, 51625, 51847, 51958, 52003, 52013, 52014, 52027, 52028, 52111, 52112, 52167, 52335, 5 394, 52631, 52657, 52670,		
		D	
		Daimler-Benz Aktiengesellschaft	47102, 48106, 51613, 51906, 53209, 53460
		Dalin, D.	46528
		Dalmia Cement (Bharat) Limited	51479
		Dalrymple, J. R.	48124
		Damkevala, K. E.	52244
		Danckert, K. H.	50397
		Dano Ingeniorforretning og Maskin- fabrik, Ingenior Kai Petersen's Fond	53459
		Dansk Industri Syndikat, Com- pagnie Madsen A/S	47491, 48396, 48397, 50381
		Dansmith Corporation The	51388
		Daroga, N. D.	46501

Names.	Register Numbers.	Names.	Register Numbers.
D—contd.		D—contd.	
Daruvalla, D. N. Dr.	51257, 51753, 52071, 52207, 52208	Degen, W. Dipl. Ing.	47259, 48692
Darvill, A. B.	53085	De La Combe, A. J.	49796
Das, C. R.	52344	De Lasglo, P. D.	50477
Das, D.	49379	De Laval Separator Company, The	49006
Das Gupta, B.	47921, 47922.	Delhi Cloth and General Mills Co., Limited, The	52588
Das Gupta, H. P.	46685	Delong, B. Leon	48281
Das Gupta, J. C. Dr.	49568	Delourme—Houde, J. M. R. A. . .	49807
Dasgupta, S. C.	52814	Demag Aktiengesellschaft	49828, 51902, 52920
Das Haribole	52715	Demag-Elektrometallurgie G. m. b. H.	46738, 51678
Das, I.	49379	De Mello, R. Dr.	51142
Das, K. C.	47116, 49360	Demmer-Werke, Adalbert Demmer	50108
Das, K. S.	49920	Dennison, Kett & Company Limited	52974
Das, M. V.	47419	De Normanville, E. J.	47795
Das, Narayan	51380	Denovan, A. E. C.	51719, 51720
Das, Rabindranath	50875	Deodhar, G. W.	47457, 47458, 48164, 49201, 49313, 49314
Das, R. G.	53027	De Oliverra Barros, A. J. C. . . .	47479
Das, R. N.	49859	De Penning, M. G.	52157, 52666
Dass, U. K.	47761	DePenning, V. E.	46562, 47329, 49716
Dastoor, D. N.	51959 51960	DePenning, W. F.	49258, 50159, 50409
Datar, D. S.	47999, 49178, 51701	Desai, A. G.	47530, 51241
Date, K. G.	50749, 52501	Desai, H. C.	53321, 53322
Datta, D. N.	46678	Desai, M. C.	48296
Datta, J. N.	50076, 52640	Desai, P. R.	47450, 47493, 47567, 47616
Datye, K. V.	50771, 52325, 52344	De, S. C.	47841
Davey, Paxman and Company Limited	51817	Deshpande, R. K. D. (SM)	46710, 46711 46712, 46765, 46766
David Brown Tractors (Engineering) Limited	51975, 53000, 53001, 53389	Deshpande, V. D.	50686
David Etchells & Son Limited . .	49988	Desmier, E. W.	47991, 48475
David Harcourt Limited	50630	Destrol Manufacturing Company Limited	50083
Davidson, D. H. M.	48482	De Terramala, P. M. G.	50777
Davies, B.	46574	De Toledo, M.	47987
Davison, B. K.	47442	Deutsche Gold-Und Silber-Scheide- dean-Stalt, Vormals Roessler . .	46856, 46869, 48533, 48590, 48818, 49233, 49407, 49671, 51675, 52748, 53134, 53135
Davis Press Pad Co.	51423	Deutsche Kohlenbergbau-Leitung .	47609
Davy and United Engineering Company Limited	46539, 47324, 48539, 48643, 49805, 49813	Deutsche, Tafelglas A. G. Detag .	53076
Dawson, I. V.	48491	Devadoss, S. P.	48120
Dayal, I.	47349	Devine, J. H.	47776, 51282
Day, R. B.	48601	Devi, Rani Kadambari	46710, 46711, 46712
Dayton Rubber Company The . .	49826		
D. C. B. Limited	52538		
Deekers, J.	52177		
De Directie Van De Statsmijnen in Limburg, Handelend Voor En Namens De Staat Der Neder- landen	46979		
Deering Miliken Research Trust .	52702, 53142		

Names.	Register Numbers.	Names.	Register Numbers.
D—contd.		D—contd.	
Dev, K. M.	46860	Divekar, V. Y.	51971
Devos & Raynolds Company, Inc. .	51579	Diwadkar, A. J.	50684
De Vries & Co's Ijzerhandel N. V.	51585	D. Napier & Son Limited	50225, 50226,
Dewey] & Almy Chemical Company	47320	50371, 50372, 50421, 50752,	
Dexion Limited	49514,	50841, 51364, 51826, 52236,	
49515, 49516, 50996		52247, 52427, 52954, 53029,	
Dhand, D. K.	52181	53037, 53053, 53160, 53392,	
Dhawan, J. D. Mrs.	46458,	53393,	
49216, 53441		Doctor, S. M.	48767
Dhiraj Metal Works	48426	Dode, P. W.	49940
Dholkawalla, G. T.	48244	Dolder, G.	47302
Diamond Alkali Company	51422	Dominion Magnesium Limited	47214
Diamond Blower Company Limited	46827,	Donnelly, R. P.	48076
46891		Don Watson & Co., Ltd.	51689
Didier-Kogag-Hinselmann, Kokso-		Doraiswami, A. K.	46901
fenbau Und Gasverwertung, A. G.	47821	Dorman & Smith Limited	52214, 52215,
Didier-Werke A. G.	51283,	52481, 52482, 52483, 52884	
	51284	Dorman, Long & Company Limited	51556
Diebold, F.	49638	Dorr Company, The	46873,
Dietrich, C. W. M.	52091	49061, 50254, 50551.	
Dighe, B. S.	49332,	Door-Oliver Inc.	50616, 50638,
	49333	51851, 52749, 52930, 53193	
Dighe, V. S.	49904	Doshi, K. M.	48989
Dijk, P. V.	48549		52087
Dimri, M. D.	49693	Doss, K. S. G.	52758
Dinger, A.	53033	Dot Pens Limited	50081,
Dionisotti, J.	48214,	50783, 50784, 51608	
	48870	Douglas Aircraft Company, Inc.	51607
Diotti, G.	46536	Douglas Fraser & Sons Limited	48109,
	46537	48944, 48985, 50430, 51714, 53176	
Dipag Limited	52516	Doulatram, G. K. Mrs.	52477
Director, Indian Agricultural		Dow Chemical Company, The	46929,
Research Institute (Pusa), New		48650, 49320, 49432, 50491,	
Delhi. The	48125,	50550, 50889, 51338, 51878,	
48429, 49075, 49359, 49771,		53172	
49772, 50004, 52580.		Dowsett, R. W.	47006
Director, Indian Central Jute		Drake and Fletcher Limited	48557,
Committee, Technological Re-		49917, 50038, 50789	
search Laboratories, Calcutta	53284	Dr. C. Otto & Comp. G. m. b. H.	47827,
Director, Indian Institute of		50094, 52875,	
Science, Bangalore 3	47010,	Dreyer, A.	47987
47585, 47586, 47587, 48046,		Dronsfield Brothers Limited	50812,
48520, 48656, 50636, 50970,		51305, 52428	
52168, 53377		Dronsfield, S. W.	50812,
Director, Institute of Agriculture,		51305, 52428,	
Anand	49064	Dry Accumulator Company Limi-	
Director, Technical Development,		ted, The	49613
M. G. O. Branch, Army Head-		D. Sebel & Company Ltd	53071
quarters, New Delhi, The	46816,	D'Silva, A. N. Capt.	46544,
46820, 46821, 47272, 47273,		46545, 46546, 46547, 46548,	
47311, 51610, 53399		50010, 50084, 50965	
Director, Technical Development		D. S. Plugs Limited	52966
(TD-16)	53398	D. Trapow & Company Limited	50385
Disco Incorporated	49093	Dubey, R. S. Dr.	46621, 50228,
Distillers Company Limited, The	47602	51165, 51257, 51753, 52071	
47603, 48248, 48295, 48371,		Dudler, J.	50558
48394, 48432, 50046, 51326,			
51964			

Names. Register
Numbers.

D—contd.

Duisburger Kupferhutte	51299
Duncan, A. F.	49155
Dungler, J.	50988
	52350, 52379, 53084
Dunlop, M.	50640
Dunlop Rubber Company Limited	46490, 46584,
46615, 46649, 46658, 46659,	
46683, 46684, 46815, 46872,	
46911, 46936, 47024, 47070,	
47073, 47074, 47126, 47143,	
47164, 47372, 47465, 47593,	
47629, 47689, 47710, 47711,	
47712, 47713, 47900, 47930,	
47973, 48047, 48317, 48318,	
48372, 48378, 48425, 48478,	
48479, 48526, 48561, 48579,	
48635, 48950, 49045, 49046,	
49160, 49192, 49231, 49232,	
49309, 49310, 49339, 49391,	
49548, 49621, 49622, 49849,	
49895, 49971, 49979, 50078,	
50140, 50171, 50176, 50267,	
50277, 50359, 50553, 50554,	
50627, 50648, 50819, 50846,	
50975, 50976, 51049, 51050,	
51076, 51093, 51119, 51120,	
51314, 51315, 51511, 51718,	
51818, 51917, 52123, 52155,	
52173, 52239, 52285, 52322,	
52364, 52401, 52402, 52484,	
52658, 52659, 52985, 53119,	
	53288, 53362, 53363.
Durand & Huguenin A. G.	48269, 48468,
	49620, 49925, 51231, 51294, 53191
Dutta, B. B.	47065
Dutt, B. C.	52784
Dutt, C. K.	47304
Dutt, D. R.	48504, 48 777
Dutt, J. N.	49228, 52224
Dutt, K. Dr. Ing.	49395
Dutt, T. C.	52784
Duval, B.	51852
Dux Chemicals Solutions Company Limited.	53159
D. Waldie and Col. Ltd.,	52381
Dyckerhoff & Widmann Komman- ditgesellschaft.	49351, 49762,

E

Eadie Bros. & Co. Limited	46966
Earnshaw, S. A.	52139
Easipower Limited	49965
Eastwood, J. A.	49370
E. Boydell & Company Limited	48960
Eckart Werke Standard Bronzepul- ver-Werke Carl Eckart.	50497
Ecrofnier & Partners Limited	50633

Names. Register
Numbers.

E—contd.

Edal Behram, J. D.	52889, 53088
Edeleanu Gesellschaft m.b.H.	47540, 48162
Ed. Geistlich Sohne A. G. Fur Chemi- sche Industrie.	50643, 51855, 53316, 53317
Edison Swan Electric Company Limited, The.	51996
Edmonds, R. A.	48531, 48720, 48721, 49489,
Ednell, D. F.	51044
Edwin Danks and Company (Old- bury) Limited.	51383, 51410 52488
E. F. G. Limited	51298
E. Fougera & Co. Inc.	49308
E. Green & Son Limited	51193
Ehny, M.	47733
Ehrhart, E. N.	51204, 51439
E. I. Du Pont De Nemours and Company.	47424, 47658, 47659, 49418, 49898, 51453, 51632, 53327
E.J. Bowman (London) Limited	47988
E. K. Cole Limited 46780, 47199, 47441, 47591, 48326, 48678, 48732	
E.K. Cole Limited	49067, 49068, 49083, 50538, 51096, 51128, 51129, 51854, 52542, 53044.
El-Cu Elettore Cucitrice Industriale Portatile S. P. A.	47857
Electraulic Presses Limited	47864, 47865, 47866, 47867, 47898, 48576, 48603, 48904, 49119, 49267, 50068, 50960, 52043, 52077, 52816, 53252.
Electrical Products (Colne) Limited	49401
Electric Auto-Lite Company, The	49603, 52036
Electric Furnace Products Company, Limited.	52981
Electric Storage Battery Company,	46982, 48513
The.	
Electrolux Corporation	48266, 51771
Elektrokemisk A.S	46557, 46741, 46784, 46889, 47203, 47600, 49103, 53268, 53286
Elektrophysikalische Anstalt Bern- hard Berghaus.	51270, 51271
Elektroprojekt	52435
Elektro-Thermit G. m. b. H.	53438
Elias, N. M.	48265
Eli Lilly and Company	47253, 51167, 52915
Ellenberger & Peensgen G. m. b. H.	52986
Elliot, H. J.	47257, 50258, 51611, 52001
Ellis, G. P.	50480
Ellis, J. L. W.	52597
Ellis, P.	50480

Names.	Register Numbers.	Names.	Register Numbers.
E—contd.		E—contd.	
Elsky, S.	46467	Eugen Bauer G.m.b.H.	47104, 47105
Emery Industries Inc.	51028	Evans Bellhouse Limited	46552
Emhart Manufacturing Company	48311	Evers, C. E. St. J.	48225, 48226, 48227
Empson, H. G.	47483	EVG Entwicklungsund Verwert- ungsgesellschaft m.b.H.	49479
Engineer-in-Chief, Light House Department Ministry of Transport, Govt. of India.	49296	E. V. Twose Limited	48159, 49993
Engineering Components Limited	50095	Ewing, C. A.	49450
English Electric Company Limited, 46823, 46923, The.	47570, 48014, 48453, 48892, 48906, 48907, 49161, 49250, 49251, 49252, 49275, 49371, 49395, 49530, 49728, 49912, 49970, 50098, 50141, 50206, 50291, 50487, 50564, 50632, 50705, 50740, 50971, 51123, 51124, 51138, 51139, 51205, 51325, 51344, 51591, 51592, 51698, 52186, 52455, 52635, 52636, 52773, 53040, 53086, 53097, 53098, 53132, 53219, 53379, 53380, 53381	Executors of James Mills Limited	52188, 52559
		Extraction Continue De Smet Societe Anonyme.	48712
		Ezuddin, H. A.	49283, 49299
		F	
Englund, G. R.	49055	Fabric Development Company Limited.	47680
Eonit Engineering Company, Limi- 50052, 50053, ted.	50980, 50981	Fabrique De Coutellerie Ch. Elsener	47037
E. P. Keogh Proprietary Limited	52374	Fahrni, F.	46934, 46935
Epscopo, U.	49908	Faigle, H.	53008
Erb, E.	52955	Fairbairn Lawson Combe Barbour 50533, 52789 Limited.	
Ercole Marelli & Co. Societa per Azioni.	51385	Fairwest (U.K.) Limited	47543, 47544 47545, 49030, 49031, 50639, 51983,
Ercoli, A.	49777, 49778	Fakirchand, K. B.	53331
Ernerfeldt, E. F.	49055	Fallon, J. T.	52586
Escher Wyss Aktien-gesellschaft.	52688	Farbenfabriken Bayer	46504, 46687, 46954, 47015, 47016, 47166, 48367, 49029, 49043
Escobar, J. N.	49763, 49764	Farbenfabriken Bayer Aktiengesell- 50961, 51110, schaft.	51180, 51664, 52049, 52050, 52051, 52304, 53093
E. Shipton & Company Limited	49367	Farbwerke Hoeschst Akriengesells- 50429, chaft Vormals Meister Lucius & 50672, 51517, Bruning.	52446, 52555, 53035, 53234.
Ess & Kay Limited	47453	Farbwerke Hoechst vormals Meister 47855, 47856 Lucius & Bruning.	48363
Essoldo Circuit (Control) Limited	46596, 46597, 46598, 46599, 46600, 50357	Farmaceutical Italia S.A.	49888, 50620, 50621, 51974, 52945
Esso Research & Engineering Co.,	50440, 50468, 50705, 51968, 52438, 52805, 52836	Farvmann Diesel, Farny and Weid- mann.	52144
Easswein, J.	53449	Fazekas, J. F.	49451
"Est" Etablissement Sciences Tech- 51051 niques.		F. Ch. Unger & Sohn.	49488
Estirajes Balmes S. A.	47408, 48126, 48127, 50142, 51354, 51679, 52365, 52495, 52496	F. C. Mehra Industries	49584
Etablissements Neyrpic	46719, 46885, 48807,, 50268, 50269, 51485, 51649	Feenstra, G. A.	50979
Etablissement Sopitex	47664	Fehrer, E. Dr.	52877
Etablissement Tresa	52475	Feinmechanik G.m.b.H..	48273
Etablissement Triplex.	51742	Feinter, H.	47863
Eternit Pietra Artificiale Societe per- 46998 Axioni.		Felco Hoists Limited	51062, 52069
ternit Societa Per Azioni	50153	Fell Developments Limited	53066
Ethyl Corporation.	52274, 52275	Ferguson Pailin Limited	51435, 51458, 51459
Eta. Geeraert & Matthys Freres, 48190 Societe Anonyme.		Fermeture Invesible S. A.	52754
		Fernandes De Lord, F. X.	48005
		Fernandes, V. R. Fr. D.	52500

Names.	Register Numbers.	Names.	Register Numbers
F—contd.		F—contd.	
Ferrand, G. A.	52196	Floro, M.	49400, 49578, 50297, 50422, 51464
Ferran, J. V.	50510	F. L. Smidth & Co. A/S.	46564, 47176 48327, 49326, 50862
Ferrero, A.	47934	Fofag Forsanose-Fabrik H. Schu- berth.	50602
Ferrest, P. J.	48810	Foges, G. Dr.	49021, 49589
Ferretti, A.	49383	Fonderies Deberny & Peignot.	50188
Ferrier, J.	47551	Ford Motor Company of Canada, Limited.	46512, 46602, 47195, 47313, 47787, 48198, 48282, 48283, 48680, 49343, 49961, 49977, 49978
Ferro Corporation	46913	Forest Research Institute and Col- leges, Dehra Dun, President, The.	47412, 47655, 49054, 52894 52895
Fey, J.	46701	Formenti, C.	46978
F. Hoffmann-La Roche & Co. Akti- engesellschaft.	46828, 47201 47677, 47709, 47842, 47883, 48016, 48017, 48071, 48179, 48218, 48340, 48652, 48798, 48864, 48917, 48921, 49009, 49048, 49063, 49240, 49298, 49346, 49411, 49477, 49537, 49540, 49754, 49782, 50014, 50064, 50249, 50256, 50415, 50530, 50531, 50625, 50699, 50,839 51387, 51507, 51794, 51832, 51880, 52054, 52136, 52176, 52189, 52190, 52230, 52333, 52441, 52463, 52464, 52474, 52519, 52551, 52596, 52868, 52988, 53059	Fornaci Riunite S. P. A.	47934
Fiala-Fernbrugg. B.	49122	Foster, F. G.	50199
Fibreglass Limited	50217	Foster, J.	47518
Fielding & Platt Limited	49823	Foster, J. W.	48774
Fielding, E.	53078	Foster, R. H.	48450, 48682
Fillery, G. T.	46825	Foster, Yates & Thom Limited	47142
Fillmore Improvement Company	49541	Foulger, F.	49254
Finr, K. F.	49929	Foundry Equipment Limited	48751, 50745
Fippard, A. J.	50561	Four oaks Spraying Machine Com- pany Ltd.	47226
Firestone Tire & Rubber Company, The.	47490, 47720, 47832, 47943, 48407, 49725, 49817, 49824, 50102, 50398, 50519, 50737, 50932, 51080, 51211, 51629, 51777, 51918, 51919, 53041..	F. Perkins Limited	51643
Firma Gebruder Eberhardt	46762, 47156	Francesco Vismara Societa Azioni.	49777, 49778
Firth-Brown Tools Limited	47210, 47211 50584	Franke, L. P.	50867
Firth Sterling, Inc.	50358	Fransson, F. W.	49132
Fischer, K. O. P.	50187	Fraunhofer, H. V.	52430, 52677
Fisher & Ludlow Limited	50921	Frawley Manufacturing Corporation	51402
Fitzgerald, A. J.	47366	Fray, V. H.	46690
Fitzjohn, A. P.	46938, 47782	Frederick Parker Limited	51442
F. J. Collin A. G.	50324	Freeman, D. A.	49864
Flamand, B.	53387	French Oil Mill Machinery Company, The.	53011
Fleischanderl, R.	49465	Freyssinet, E.	52861
Fletcher, G.	50038, 50789	Friedheim, E. A. H.	48413
Fleury, J. E.	47241, 47242	Fromel, O.	47128
Flexigrip Ltd.	51112	Frutiger, F.	49071
Flexipac Limited	49861	Fuchs, F.	52254, 52255
Florida Industrial Laboratory Inc., The.	50283	Fuchs, W. Dr.	52875
		Fulmer Research Institute Limited	47504, 52106
		Fuller Company	46727
		Fuller, L.	50667
		Fulton Bag & Cotton Mills.	50922
		Fusarc Limited	46582
		Fussell, E. G.	49862
		Fussmann, A. Ch.	49305

Names.	Register Numbers.	Names.	Register Numbers.
G		G—contd.	
Gade, G. D.	50828	General Electric Company, Ltd., The—contd.	
Gadre, G. B.	46501	50446, 50447, 50536, 50569,	
Gafach, Gesellschaft fur Angewan-	48629	50654, 50689, 50690, 50831,	
dte Chemie, M.b.H.		50959, 51053, 51054, 51243,	
Galateri. L.	52648	51277, 51395, 51396, 51397,	
Gammon (Malaya) Limited . . .	50908	51398, 51462, 51530, 51602,	
G. & J. Weir Limited	47089, 47454,	51631, 51654, 51655, 51875,	
48177, 49036, 51170		51891, 51892, 51990, 52018,	
Ganesh, K. M.	46881	52132, 52133, 52145, 52220,	
Gangoly, P. C.	52056	52359, 52451, 52531, 52642,	
Ganguli, U. Dr.	48786	52830, 52831, 53013, 53128,	
Ganguly, Murari.	49380	53203, 53224, 53269, 53339,	
Ganguly, Sanat Kumar	51197	53340	
Garda, N.	49023	General Railway Signal Company. 46534, 46688,	
Garde, G. M.	48279 48452,	47691, 50764, 50868, 52153, 52180,	
	48816, 52769	52630	
Gardella, A.	50709, 51021	General Rendering Limited . . .	47644
Gardella, C.	50709, 51021	General Steel Castings Corporation. 49670, 50130	
Gardner, A. L.	49814	53137	
Garga, B. P.	47839	George, J.	47411
Garnier, M. G.	53447	George Royston & Son Limited . .	50271
Garringtons Limited	47562	George Salter & Co. Limited . . .	51915
Garware Finance Corporation Limi-	50485, 50523,	George Spancer, Moulton & Co.	47330
ted.,	52295	(India) Ltd.	
Gas Council, The	53148	George Tucker Eyelet Company	48064
Gaumont-Kalee Seating Limited .	48454, 48519	Limited.	
Gazdur, J. C.	47183	George Turton Platts & Company 46938, 47782	
Gebruder Eberhardt	48115	Limited.	
Gebruder Junghans, A. G. . . .	50032	Georg Fischer Aktiengesellschaft . .	48433
Geeta Iron & Brass Works . . .	52492	Gerrard Industries Limited . . .	53341
Gelder, A. V.	47560	Gestetner Limited	49013, 49143
Gelsenkirchener Bergwerks Aktien-	48760, 49148,	50592, 50593, 52759, 52760, 52886	
gesellschaft.	49277,	Gevaert Photo-Producten, N. V. .	46601, 49507,
	51223	49546	
Genatosan Limited	52409, 52736,	Gewerkschaft Rheinpreussen. . .	46595, 46653
	52843	Ghadialy, P. F.	47635
General Electric Co.	47985, 49038, 51420,	Ghatak, U. P.	46607
	52408, 52717	Ghate, M. S.	50760
General Electric Company, Ltd., The		Ghate, S. N.	50760
46581, 46640, 46675, 46716,		Ghatnekar, V. V.	52962
46734, 46737, 46749, 46750,		Gheyara, F. D.	51117
46751, 46770, 46771, 46781,		Ghose, Ramapati,	49525, 49526
46787, 46813, 46834, 46882,		Ghose, Satyabrata	50047, 50198,
46921, 47011, 47012, 47151,		51196, 52425	
47209, 47213, 47228, 47266,		Ghosh, A. K.	47803, 50338, 52107
47307, 47308, 47435, 47436,		Ghosh, Bankim Bihari	51836
47437, 47447, 47637, 47643,		Ghosh, Bholanath	51337
47652, 47657, 47682, 47784,		Ghosh, B. K.	49859, 50875
47906, 47962, 47963, 48012,		Ghosh, P. B.	49998, 53436
48128, 48196, 48232, 48249,		Ghosh, R.	50181
48437, 48445, 48506, 48516,		Giara, H. C.	50315
48560, 48648, 48722, 48768,		Gibbons, G. A.	47426
48800, 48801, 48802, 48819,		Giesel-Gieslingen, A.	47470
48999, 49039, 49057, 49215,		Gilbert, W. F.	47039, 48420,
49221, 49338, 49414, 49656,		50230	
49672, 49712, 49742, 49840,		Gilder, F. N.	52512
50195 50334, 50335, 50435,			

Names.	Register Numbers.	Names.	Register Numbers.
G—contd.		G—contd.	
Gillanders Arbuthnot & Company Limited.	47836, 47837	Grant Valve Company (Proprietary) Limited, The.	50075
Gillette Company, The	50850	Grassmuck, A.	50660
Gillott, J. M.	47452	Grasso's Machinefabrieken N. V.	50552
Girette, B.	51755	Gray, J.	53094, 53205
Girichandrappa, V. R.	47356, 50571	Green, J.	47884
Giuseppe Ricci & Figlio.	50008	Greenstone, G.	50302
G. J. Liebich Co.	48995	Gregory Industries Inc.	51532
G. K. N. Group Services Limited	47862	Gresham & Craven Limited	51787, 51799, 52639
G. Kromschroder Aktiengesellschaft	50750	Gretener, E.	47000, 47939 48626, 49264, 49361, 50123, 50124 50281, 51605
Glacier Metal Company Limited The. 48019, 50696, 50977, 52234, 52687		Griffin Engineering Company, (Pro- prietary) Ltd. The.	51424
Glass Containers (Medical) Limited	51275	Griffin Wheel Company	51238, 51526 51527, 51528, 51533, 51534, 51535
Glaxo Laboratories Limited	47573, 47574, 47594, 47595, 47631, 48395, 49070, 49129, 49734, 49744, 50049, 51168 51210, 52156, 52827	Grimston, F. B.S.	48584
Gleed, H. E..	46854	Groll, H. P.A. Dr.	53213
Glenfield & Kennedy Limited	48231	Gronn, K.	52608
Globe Co., The	51739	Gruber, L.	50139
Globe Hoist Company	47254, 49274	Guest, Keen & Nettlefolds (Midd- lands) Limited.	47477
G. N. R. D. Patent Holdings Limited 51163, 51483, 51512, 51713, 51877, 52281, 52352, 52454, 53147		Guha, Manindra C.	51147
Godfrey L. Cabot Inc.	50493, 53344	Guimbretiere, L. F.	48276
Godrej & Boyce Manufacturing Company Limited. 48015, 49408, 50676, 51090, 52391		Gujarathi, M. J.	50924, 51352, 52426
Goedel, K.	46589	Gulati, K. C.	47715
Goel, B. N.	46859	Gulf Research & Development Com- pany.	47522, 48554, 48555
Goff, C. B.	52716	Gunasekera, M. V. P.	53324
Gogerly, C. M.	49303	Gundu, Rao, S. N.	52781, 52782, 52783
Gohel, V. P.	51937	Gupta, B. B.	47971
Gokhale, G. R.	53210	Gupta, B. M.	47236
Goldman, M.	52449	Gupta, B. N.	47230
Gold Mohur Mills Limited, The	51195	Gupta, C.	52890, 52891, 52342
Goodwin, N.. . . .	49330	Gupta, J. P.	47286, 47462, 49490
Goodyear Aircraft Corporation	49976, 50939, 50940, 51047, 52576, 53276	Gupta K. Mrs.	50342, 53272
Goodyear Tire and Rubber Com- pany, The 52917, 53312, 53313, 53314	52147, 52195, 53312, 53313, 53314	Gupta Moolchand	48418
Goppu, K. S.	46645, 48833	Gupta, N. K.	49520
Gora-Lee Corporation, The	52832	Gupta, S. K.	47286
Gordon, H.	48174	Gusstahlwerk Witten Aktiengesell- schaft.	50748
Gordon Warin Limited	49090	Gutehoffnungshutte Oberhausen	50337, 50587
Goss, N. P.	49498	Aktiengesellschaft.	
Goswami, S.	53391	Gutehoffnungshutte Storerade,	51109, 51296
Gotz, G.	50056	A. G.	
Goudie, N.T.E.	46574	Gutfeld, W.	50492
Govaars, J. B. G. W.	48341	Gyorgy, P.	48903
Graetz, E.	51544		
Graetz, F.	49745		
Graetz Kommandit-Gesellschaft . 47489, 47702, 50318, 50319, 51913			
Grant, E. G..	51537		

Names.	Register Numbers.	Names.	Register Numbers.
H		H—contd.	
Haas., E.	46884	Hasse, E. Dipl.-Ing	52320
Hackbridge Cable Company Limited	52076	Hattiangadi, M. S. R.. . . .	46888
Haco-Gesellschaft. A. G.	49876	Hayters Limited	50336
Hadfield, J.	47546, 48399	H. D. Hudson, Manufacturing Com- pany.	48428
Hadley Company Limited, The	50063	Heberer, W.	50145
Hagen, R.	49135, 49136, 49137, 51976	Heberlein & Co., A. G.	46756
Hagglund, D. O.	48131	Heblikar, H. G.	52573
Haidar, S. W.	53374	Heblikar, V. G.,	48687
Hair, D. L.	52317	Heckett Engineering, Inc.	51934, 51935, 51936
Halbig, P. Dr.	49799	Heetbrink, G. H.	51306
Halissgar, V. D.	49761	Heidenreich & Harbeck	49273, 51068
Hallchurch, L. W.	47299	Heinrich De Fries G. m. b. H.	47020
Halmets Ltd.	47780	Heinrich Koppers G. m. b. H.	52558, 53118, 53435
Hammans, R. R.	53256	Heizmotoren Gesellschaft mit Beschränkter Haftung	47234
Hammerschmid, J. Dr.	46533	Hemphill Company	48369, 48412, 48497, 48524, 48617, 48699, 49810, 50177, 50515, 51414
Hammond, C. F.	48700	Hemsted, E. C. E.	49940, 51349, 51350, 51371, 51726, 52416
Hamnett, J.	52844	Henderson, F. G. R.	51489
Hamol, A. G.	49903	Hendry, N.	47884
Hand-Skill Looms, Inc.	49147	Henkel & Cie G. M. B. H.	50212, 50213, 50623, 50683, 53432
Haniel & Lueg G. m. b. H.	49954	Hennessey, D. E.	53099
Hankin, R. W.	47202	Henriksen, E. J. J.	52339
Hans Raj Gupta & Co., Ltd.	52727	Henry, F.	49323
Hararwalla Engineering Works	48213	Henry, G.	53449
Harbens Limited	47763, 49592	Henry Siom (Holdings) Limited	53430
Hard Aluminium Surfaces Limited . . .	48108	Henry Williams Limited	48843
Hardman & Holden Limited	48184	Henschel & John G. m. b. H.	46783, 52932
Hardwick, H. B.	48925, 50245	Herbert Morris Limited	51417
Harlalka, V. P.	50460	Herbst, R. N.	53028
Harley, F. B.	49368, 49369	Hercules Cycle & Motor Co., Ltd., The	46837
Harnischfeger Corporation	52763	Hercules Powder Company	51214
Harris, D. A.	49878	Heron, A. G.	51779, 51820, 52405
Harris, L. R. F.	50671, 51035, 51087, 52126, 53431	Hertig, W.	47413
Harrison, D. D.	49905, 49906	Herts Pharmaceuticals Limited	47185
Harrison, N.. . . .	49905, 49906	Herzog, R.	52530
Harris Research Laboratories Inc. . . .	52178	Hess, H.	48316
Harry Ferguson Inc.	47301, 48175, 48647, 52592,	Heuer, R. P.	53433
Harry Ferguson, Ltd.,	47279, 49109, 49576, 49818, 50457, 50978	Heussner, G.	51372
Harry Ferguson of India Limited	48274, 50325	Heyden Chemical Corporation	49945, 50502
Harry Ferguson Research Limited	46463, 46464, 46465, 46466, 48836, 50242, 53138, 53139	H. G. Houghton and Engineering Lighting Equipment Company Limited	52159
Hart, A. S. C.	47798	Hickman, K. C. D.	49749
Hartleb, E. Dr.	51707, 51791	Hieke, A.	51715, 52398
Hartridge, L.	53242, 53243	Higginbotham, O.	46951
Harza, L. F.	49323		
Harza, R. D.	52246		
Harza, Z. D.	5246		
Hasija, B. D.	52061, 52218, 53254		

Names.	Register Numbers.	Names.	Register Numbers.
H—contd.		H—contd.	
Higgins, E. B.	47565	Hot Point Electric Appliance Co., Ltd., The	53443
High Duty Alloys Limited	52870	Houdry Process Corporation	47218
Higonnet, R. A. E.	48683	Houilleres Du Bassin De Lorraine	52429
Hillier, E. W.	49323	Houston, J. M.	52739, 53336
Hindle A.	49741, 50202, 50203, 51263, 52893	Howard and Sons, Ltd.	47538, 47959
Hindmarch, T.	46665, 48614, 48662, 49957, 50061, 50568, 50773, 50901, 52747, 52883, 52934	Howards of Ilford Limited	53309, 53310
Hindustan Aircraft Limited	50504	Howrah Trading Co., Ltd.	49097, 49098, 49099, 49179, 49180, 49181, 49182, 49183
Hindustan Construction Co., Ltd., The	48543, 48544, 48545	H. Parbhoodas & Co.	49680
Hindustan Metal Industries	48022, 48024, 48451, 48547	Huesa, L. A.	51160
Hindusthan Plastics Limited	48287, 48288	Hufschmid, A.	52470
Hinsch, J.	49679	Hug, A. R.	51624
Hinze, O.	49980, 53165	Hughes Tool Company	47088, 50897, 53279
Hispano-Suiza (Suisse) S. A.	46788, 46789	Hugh Wood and Company Limited	46662, 50540, 50541
H. J. Chapman and Company Limited	51276	Hugo Stinnes Verwaltung G. m. b. H.	48931, 48932
Hjellnes, K.	50248	Huidobro, P. M.	49763, 49764
Hobbs Transmission Limited	50025, 50132	Hules, F.	50143
Hobson, N. (Mrs.)	49935	Humber Limited	50186
Hodel, H.	51230	Hunnebeck, E. M.	49986
Hodgson, D. J.	51719, 51720	Huntington, Heberlein and Com- pany Limited	52124
Hodgson, E. S.	48854	Hutchinson, H.	51916
Hoffman, A. C.	52246	Huttenwerke Siegerland A. G.	47520
Hoganas Billesholms Aktiebolag	51616, 51617, 51618, 52609	Hutter & Schrantz Aktiengesell- schaft Siebwaren Und Filztuch- Fabriken	46485
Hogan, J.	51017	Huwood Components Ltd.	49008, 50790, 51020
Holay, P. V.	48730	Huwood Mining Machinery Ltd.	49230
Holding Intercito S. A.	48936, 51693	H. W. Ward and Company Ltd.	51559, 53412
Hollo, G.	47686	Hyderabad Allwyn Metal Works, Ltd.	48188, 48441
Holmberg, T. F.	48888	Hyder, S. Z.	49354
Holt Bracken Breaker Company Limited, The	47175, 52738	Hydrocarbon Research, Inc.	47824
Holz, E.	46559		
Homewood, R. W.	46650		
Honda, K.	48813		
Honda, S.	47724		
Honore, E.	51456		
Hoole, C. B.	52885		
Hoover Limited	46950, 49886, 49887, 50270, 50725, 50726, 51029, 52314		
Horak, J.	49967		
Hordon, Mason and Edwards Limited	53038, 53226, 53227, 53326		
Horizons Titanium Corporation	46524, 46525, 46526, 51972, 53018		
Horst, H. V. D. Dr.	50611		
Horton, W. G.	49081		
Hoskins, D.	48189		
		I	
		IBM United Kingdom Ltd.	47115
		Idnani, M. A.	49075
		Imamura, T.	48088, 48089, 48172
		Imber Research Ltd.	50125
		Imhausen & Co., G. m. b. H.	46851
		Imhausen Werke G. m. b. H.	49841
		Immerzeel, H. V.	51000

Names.				Register Numbers.	Names.				Register Numbers.
I—contd.					I—contd.				
Imperial Chemical Industries Limited.	46471,	46472,	46491,	46492,	Indian Telephone Industries, Ltd.				46652
	46521,	46523,	46568,	46583,	Indiresan, P. V.				51130
	46616,	46755,	46866,	46893,	Industriaktiebolaget Luxor				50408
	46899,	46922,	46956,	47017,	Industrial and Financial Association Inc.	47899,	48953,	48954,	48955, 51676
	47018,	47042,	47043,	47059,	Industrial Devices, Inc.				50832
	47095,	47263,	47303,	47360,	Industrial Rayon Corporation				52731
	47400,	47414,	47554,	47630,	Industrial Service & Engineers Ltd.				48929
	47694,	47695,	47745,	47820,		49685,	49687,		50240
	47983,	48098,	48148,	48262,	Industrial Synthetics Corporation				50366
	48270,	48271,	48415,	48580,	Industrial Trustee Holding Company				50751
	48623,	48624,	48625,	48689,	Inertia Starter Developments Ltd.				51590
	48729,	48755,	48756,	48937,	Infilco Incorporated		51463,	51639,	51776
	48938,	48939,	48978,	49025,	Ingenieurs bureau Lemetchromium H, Van Der Horst N. V.				50611
	49077,	49078,	49079,	49080,	Ingersoll Limited				46758
	49128,	49174,	49213,	49266,	Ing. Giovanni Radio & C. S. P. A.				51373
	49453,	49473,	49492,	49493,	Ingold & Co.				50231
	49529,	49571,	49610,	49667,	Ingold, H.				49901
	49773,	49854,	49894,	49927,	Ingram, G. O.				46497
	49934,	49974,	49980,	50070,	Ingram, G. (Senior)				50189
	50170,	50204,	50321,	50386,	Ingvarsdén, J. F. I.				46706
	50505,	50596,	50609,	50617,	Inland Steel Company		48199,		49557
	50628,	50629,	50650,	50651,	Insect Controls, Inc.				49932
	50688,	50703,	50704,	50730,	Instant Milk Co.				50931
	50731,	50890,	50950,	50951,	Interlake Iron Corporation		47882,		51928
	50952,	50967,	51118,	51182,	International Business Machine Corporation		47295,	49614,	49713, 49843,
	51292,	51316,	51317,	51384,		49969,	50769,	51580,	51921, 51922,
	51452,	51475,	51476,	51543,		51956,	52340,	52567,	52752, 53014,
	51557,	51634,	51641,	51674,	International Combustion (Holdings) Ltd.				53077
	51685,	51784,	51785,	51914,			49804,	50678,	51443
	51992,	52005,	52029,	52045,	International General Electric Company of New York Ltd.		47774,		48320, 50634
	52046,	52047,	52080,	52081,	International Harvester Company				47970
	52121,	52122,	52146,	52184,	International Kenmore Ltd.				51833
	52193,	52194,	52272,	52273,	International Minerals & Chemical Corporation				51411
	52283,	52323,	52351,	52355,	International Physical Establishment				49882
	52356,	52452,	52453,	52460,	Internationella Siporex Aktiebolaget		47041,		52210
	52490,	52504,	52540,	52557,	Intonacatrice Tigre S. R. L.				53388
	52568,	52569,	52623,	52681,	Inventa, A. G.		50157,	52845,	52846, 52847, 52931
	52808,	52879,	52880,	52899,	Inventa A. G. für Forschung und Patentverwertung		48494,	48946,	49692, 51946, 52057, 52400
	52937,	52983,	52984,	52994,	Inventors' Industrial Corporation Ltd.		46633,	48285,	48286, 49144, 49145, 49146, 51064
	53015,	53022,	53079,	53087,	Investigacao E Exploracao Industrial (S. A. R. L.)				49686, 52788
	53104,	53131,	53192,	53220,					
	53274,	53287,	53318,	53337,					
	53382,	53383,	53384,	53424,					
	53425,	53426,							
Imperial Paper & Color, Corpn.				47772					
India Industrial Works, Ltd.				51268					
Indian Central Cotton Committee				47840, 50345					
Indian Hume Pipe Company Limited, The			48841,	52811					
Indian Oxygen & Acetylene Company Limited, The	46635,	46686,	47421,						
	47422,	47569,	47581,	47830,					
	48000,	48001,	49056,	49138,					
	49552,	50664,	51155,	51529,					
	51870,	51871,	51872,	51873,					
	52152,	52260,	52479,	52494,					
	53450,								
Indian Steel Company				48199					
Indian Tea Association, The, Chairman,			51747,	51988, 52120					

Names.	Register Numbers.	Names.	Register Numbers.
I—contd.		J—contd.	
Ions Exchange & Chemical Corporation	52197	J. Day & Co., (Derby Works) Ltd.	48901
Irani, F. K.	53239	J. E. Collet & Fils	50646
Irco Societe d'Applications et de Recherches Industrielles et Commerciales	49668	Jeelani, S. A.	49127
Iremonger, A. R. A.	46556	Jeewanlal (1926) Ltd.	48224, 49194
Isaac Jackson & Sons, Ltd.	48840	Jensen, B. B. S.	51405
Iseghem, L. V.	51000	Jenson & Nicholson (India) Ltd.	51812
Ishizuka, H.	46585	Jewell, P. S.	46497
ISO S. P. A.	49037	J. Foster and Company Ltd.	47518
Iten, B. H.	52500	J. F. Scholten & Zonen Curacao N. V.	53185
Iwata, Y.	49788	Jhanghiani, S. F.	50816
Iyengar, H. D. R.	50466	Jha, N. R.	48548
Iyengar, R. L. N.	47840	J. Lyons and Company Limited	47828, 47829, 51103
Iyer, D. R. S.	46875	J, Manikrai & Sons.	46613, 46824
Iyer, K. N. S.	50687	J, M. Huber Corporation	50023
Iyer, P. H. S. R.	48772	J, N. Marshall & Company	52087
Iyer, P. R. T.	50549	Joab, W.	47717
Iyer, R. I. A.	46487, 46612, 46846, 47169	Jog, D. S.	48008
Iyer, S. L.	47903	John B. Pierce Foundation	56571
Izchaki, S.	50586	John Bright & Brothers Ltd.	47079, 47080, 50465
J		John, Dalglish & Sons, Ltd.	46474
Jackson & Church Company	46669	John Harper & Company Ltd.	51697
Jackson, H. C. J.	48848	John Kerr & Company (Manchester) Ltd.	47494
Jacobson, G. B.	51800	John McNeil & Company Ltd.	48346, 48685
Jacques Loewe Research Founda- tion, The	51488	Johnson and Philips Ltd.	47620, 48253
J. A. Crabtree & Co., Ltd.	48878	John Thompson Water Tube Boilers Ltd.	52243, 53330
Jager, L.	51907	Jokisaari, H. Olli	48280
Jain, Motilal, Dr.	50417	Joos, B. Dr.	52022, 53173
Jain, N. S.	47227, 48795, 50604, 51164	Jordan, S.	48615
Jalan, K. L.	47847, 47848	Joseph Bancroft & Sons, Co.	49191, 51630
James Beresford & Son, Ltd.	46470, 50441	Joseph Hibbert & Company Ltd.	50920
James Burn & Company Ltd.	50456	Joseph Lucas (Industries) Ltd.	47947
James H. Lamont & Company Ltd.	51905	Joshi, D.	52572
James Mackie & Sons, Ltd.	47956, 49121, 49485, 53151	Joshi, D. F. D.	46732, 51970
J. & P. Coats Ltd.	52140, 52141	Joshi, J. P.	50379
Janssen, J. H. J.	50661	Joshi, S. P.	47168, 48898, 48899, 51912
Jansson, A. E. E.	48131	Joshi, S. Y.	48008
Jarolux, A. G.	49902	Joukovsky, S.	46667
Jason, A. C.	51273	Jozif, J.	50290
Javdekar, B. V.	46952	J, Pohlig Aktiengesellschaft	48007
Javeri, M. N.	52581	J. R. Geigy A-G.	46479, 46997, 47460, 49698, 50031, 50486, 50594, 50649, 51073, 51845, 51965, 52033, 52221, 52286, 52528, 52603, 52896, 53145
Jayaraman, N. Dr.	53251	J. Stone & Co., (Deptford) Ltd.	46672, 48075, 48217, 48930, 49860, 49900, 50963, 51065, 52949.
Jayaramdas, P.	53373	Judd, G. L. M.	49877
Jay Engineering Works Ltd.	47929, 48023, 49835		
J. Bibby and Sons, Ltd.	52866, 52867		

Names.	Register Numbers.	Names.	Register Numbers.
<i>J—contd.</i>		<i>K—contd.</i>	
Junghans H. Dr.	50032	Katrak, M. A.	52977
Junghans, S.	46560, 46932, 49278, 49844	Kaulen, R.	51898, 51979
Junnarkar, P. K.	51998	Kavanagh, J. A.	51999, 52000, 53006
Justoni, R.	49777, 49778	Kay & Company (Engineers) Limited	47779, 48820
Jute Industries Ltd.	52953	Kay & Lee Limited	50811
J. W. & H. Plate Ltd.	50498	Kaypee & Co.	50821
<i>K</i>		Kazmi, A. Mir.	52946
Kabra, J.	46667	K. C. P. Limited, The	49918
Kagalwala, A.	48334, 49100, 53419	Kedia, G. C.	47977, 47978, 47979, 49357
Kaick, E. V.	48316	Keeler, L. M.	52201
Kalbag, M. S.	50850, 52851, 52852, 52853	Keil, K. F. Dr. Ing.	49092
Kalbag, T. S.	52850, 52851, 52852, 52853	Kelen, M. V. D.	51000
Kalbag, V. S.	52850, 52851, 52852, 52853	Kelkar, S. M.	46739
Kale, D. G.	49767	Kember, N. F.	48810
Kale, G. B.	46900	Kemeny, J.	48842
Kallay, F.	48830, 49623, 49675, 52348	Kendall, O.	51403
Kolsi, B. S.	49513	Kennedy, E. J.	46707, 46708
Kamat, B. K.	46740	Kennedy, J. E.	47789, 51593
Kamath, V. G.	52207, 52208	Kennedy-Van Saun Mfg. & Eng. Corporation	51127, 51487
Kambli, N. P.	50454	Kentish, R. N.	50677
Kambli, S. P.	50454	Kerlux, S. A.	46984
Kamborian, J. S.	47831	Keshri Mull Kundan Mull	47890
Kamesam, S. Dr.	46858, 47642, 47670, 47765, 47834, 47920, 48374, 48375, 48386, 48447, 48889, 48924	Kezar Limited	49663
Kamlet, J.	52779	Khaitan, S.	50020
Kanegafuchi Boseki Kabushiki Kaisha (Kanegafuchi Spinning Co., Ltd.)	48455, 51225	Khan, A. A.	52694
Kane, G. P. Dr.	46740	Khan, A. N.	51003
Kane, J. G. Dr.	48405	Khan, A. R.	48521, 48522, 52682
Kansara, C. V.	48153	Khatau Makanji Spinning and Weaving Company Limited, The.	48972, 49169, 50390
Kansara, H. Z.	49724	Khosla, Kanshi Ram	50356
Kansara, P. J.	48085	Khosla, Karan Raj	50356
Kant, R.	46732, 51970	Khurshodji Nariman	48775
Kanvinde, A. P. C.	50453	Kidwai, Q. A.	50914, 52712
Kanwar, S.	52678	Kieber, E.	48381, 51348
Karamchand Premchand Limited	47596	King, C. R.	48697
Karanjia, S. K.	47321	King, D. M.	47628
Karanjia, T. K. Mrs.	48348	King, J. G. T.	46497
Karantha, K. V.	46578, 47385, 48293, 49335, 49392, 49605, 50770, 51626	King, W. H.	51746
Karapurka, P. D.	51846	Kinki Nippon Tetsudo Kabushiki Kaisha	52882
Karmalkar, D.	47331, 49058	Kriloskar, S. L.	51545
Karnani, V. N.	51242	Kishore, S. R.	53456
Kasargod, S. V.	52850, 52851, 52852, 52853	Klemm, W.	48665
Katave, S. D.	49634	Klinke, F.	50214
Kater, H.	46830	Klockner-Humboldt-Deutz A. G.	51319
		Klugkist, J. H. Dr.	51561
		K. N. H. Corporation	46803
		Kneihahn, W. Dr. Ing. R. Prof.	50853
		Knoll A.-G.	47107, 47108, 47109

Names. Register
Numbers.

K—contd.

Knoll Aktiengesellschaft	48587, 48600
Knoll Aktiengesellschaft, Chemische Fabriken, Ludwigshafen on Rhine	51681
Knutsson, S.	52979
Kohorn, H. V.	53023
Kohorn, O. V.	49909
Kolandaiswamy, R. D.	47383
Kolisman Instrument Corporation	49059, 50001
Komline-Sanderson Engineering Corporation	53301
Koninklijke Industrieela Maats- chappij Voorheen Noury & Van Der Lande N. V.	48967
Koninkbikje Nederlandsche Gist & Spiritusfabrick N. V.	52990 53157,
Koppanyi, T.	49451
Koppers Company Inc.	46806, 47661, 49701, 50193, 50346, 50404, 50929
Koreshi, S. H.	49349
Kosmek, Limited	52072
Kotterink, J. J. M. H. (Miss)	48902
Ko-We Niederschaftofen Gesell- schaft	50235, 52875, 53420
Kowshik, V. R.	50684
Kracklauer, A. C.	48565
Krebs, T.	50829
Kreidler, A.	47416, 47417, 47418
Kreidler, A. Dipl. Ing.	50241, 51346, 51419, 51671, 52113, 52198, 52199, 52200
Kremer, H.	51719, 51720
Kreutzer, C. Dr. Ing.	46910
Kriegbaum, O.	47648
Krishnamurthi, R.	46817
Krishna, P.	52817
Krishnaswami, K. V.	52219
Krueger, R.	50794
Krug H.	48716, 49203 50869, 51770
Kruppa, W. J.	49015
Kruse, G. R.	50525
Kruse, S. A.	50525
Krusius, E.	46843, 46844
Kudo, Z.	49788
Kugelfischer Georg Schafer & Co.	51831, 53345
Kuhn, R.	48903
Kulkarni, K. S.	47265
Kulkarni, P. K.	52270
Kulkarni, S. D.	49175
Kuloor, N. R. Dr.	46486, 46621
Kullor, N. R. Dr	40915

Names. Register
Numbers.

K—concl.

Kundert A.	50331
Kundu, S.	48622
Kunik, W.	49699
Kuntz, W. H.	51572
L	
Laatsad, O.	48877
Lackner, E. Ing. Dr.	53194
Lackner, J.	53375, 53376
Lacrinoid Products Limited	49135, 49136, 49137, 51976,
Lad, K. M.	48670
Lahiri, S. K.	49296
Lala, A. F.	50168
Lal, D. M.	52817, 52833
Lalljee, F. H. A.	48055, 48365, 48430, 48461
Lal, R.	48221
Lal, R. N.	47942
Lamines Company	4943
Lamson Paragon Supply Company Limited	46478, 47797 48510, 51949
L. and C. Steinmuller, G. M. B. H.	50601
Lane & Whittaker Limited	50119
Lang, G.	53375, 53376
Lang Pen Company Limited, The	47737
Lanninger, K. L.	53095
Lanova A-G	47106, 47531, 49579, 51612
Lapeyre, A. C.	52595
Lapeyre, E. M.	52595
Lapeyre, F. H.	52595
Lapeyre, F. S.	52595
Lapeyre, J. M.	52595
Lamporte Chemicals Limited	49461, 49462, 49463, 49736, 49768, 51809, 51977, 52090, 52229, 52290
Latham Abercrombie and Co., Ltd.	49560, 50735
Lathrop, E. C.	46638
Latorre, A. M.	52527
Laupman, R. R.	47451
Lawler, Ayers & Co. Ltd.	49845, 50059, 50820
Lawrence, E.	47177, 48735
Lazalloys Limited	52794
L. De Rois, S. A.	52021
Leader, D. A.	52544
Lebret, J. M. L. F.	48144, 49140
Lecher, J.	46506, 52311
Leader & Co. A. G.	50500, 50501

Names.	Register Numbers.	Names.	Register Numbers.
L—contd.		L—contd.	
Lee, A.	47238	Lindner G. m. b. H.	50813
Lee, D. H.	51766	Lindsay, W.	51390, 51391
Leeds & Bradford Boiler Company Limited, The	46868	Lindwall, G.	46898, 52148
Lehner-Stirнемann, M.	51603	Linen Thread Company Limited, The	48591
Lele, K. Mrs.	47700	Lining Components Limited	48700
Leley, V. K. Dr.	47946, 50765	Linoleum Manufacturing Company Limited	50809, 50810
Lenz, K.	48812	Linzell, C. J.	50936
Leo L. Lechene	52461	Lionweld Limited	51094
Lepetit S. P. A.	48133, 48134, 48135, 48136	List, H.	49790, 49893
Les Laboratories Dausse	49474, 49797	Livingstone, T.	48975
Leslie, P.	48559	Ljungstrom, F.	50303, 51393
Leslie-Smith, L.	51374	Lock Joint Pipe Company	46634, 48845
Les Usines De Melle	49024, 50631, 50634	Lockspike Limited	51157
Les Usines De Melle, (Societe Anonyme.)	46742, 47262, 48112, 49024, 50631, 50909, 52828	Lodowici, J. W.	47427
Les Vehicules Guides sur Pneu- matiques	46798	Loewy Construction Company Inc.	51278
Letourneau, R. G.. . . .	50388	Loewy Engineering Company Limi- ted, The	47547, 47548, 47563
Lever, A. E.	51498	Longley, C. A.	49856
Levitation Limited	48527	Longley, H. J.	50182, 50253, 50886, 52399, 52532, 52728
Lewenstein, M. J.	50983	Lonker, V. V.	51710
Lewis, A.	47917	Lonza Electric and Chemical Works Limited	49985, 50814
Lewis Berger & Sons Limited	47875, 48693	Lonza Elektrizitatswerke Und Che- mische Fabriken Aktiengesell- schaft	46627, 49110
Lhotka, R.	51825	Lorenz, A.	50830
Lian, T. S.	50780	Lotus Industries	47532, 49249
Libbey-Owens-Ford Glass Com- pany	52777, 52 28, 53166, 53298, 53299, 53332, 53333, 53370, 53371	Lovens Kemiske Fabrik Ved A. Kongsted	47267, 47268, 48101, 49652, 52520, 52602
"LICENCIA" Talalmanyokat Ertekesito Vallalat.	46555/ 47972, 48366, 51555	Lowell Specialty Company	46691
Lieberman, E.	47238	Ludlow, L. G.	51611, 52001
Light House Deptt. Ministry of Transport, Government of India, Engineer-in-Chief	49296	Ludlow Manufacturing & Sales Co.	50399
Lightning Fasteners, Ltd.	48518	Lummas Cotton Gin Company	51433
Liljamo, Y.	52385	Lund, A. J.	47814
Lilley, G. M.	49913	Lund, J.	48036
Lillienskiold, M. V.	50718, 50719, 50720	Lurgi Gesellschaft fur Warmetech- nik m. b. H.	46483, 47013, 47051, 47075, 47373, 48166, 48167, 48168, 52980
Limaye, R. K.	53271	Luvo Limited	47525, 47526
Limaye, V. D.	47685		
Limb, F.	50739	M	
Limboowalla, D. B.	49023	Maatschappij Voor Kolengewerking Stamicarbon N. V.	464732
Limoons	47473	47026, 47283, 47467, 47835, 47846, 47950, 47951, 48062, 48254, 4851,	
Lincoln Electric Co., Ltd.	47082	MacGregor, R. A.	48118, 48438
Lincoln Electric Company The	46914, 50565		

Names.	Register Numbers.	Names.	Register Numbers.
M—contd.		M—contd.	
Machinery Manufacturers Corpora- tion Ltd.	47064, 48391	Martin, J.	47895, 50695, 52663, 52664, 52665
Macilwaine, G. W.	47061	Martiri, R.	49650
Mackness, A. J.	52959	Maschinenfabrik Augsbu- berg A. G.	46961, 48717, 49200, 49781, 50054, 52310, 52626, 52627, 52628, 52629, 53290
Macleans Ltd.	48401, 52871, 53439	Maschinenfabrik Ruti A.G. vormal- Caspar Honegger	53244, 53245, 53246, 53247
MacLean, W. D.	53400, 53401	Mashruwala, M. N.	50074, 50292
MacPh Engineering Co. of Canada, Ltd., The	47622	Maskin Aktienolaget Plavia	50376
Macro, S.	51097	Masseys-Harris-Ferguson Inc.	52905
Maculan, R. Ing. Dr.	53404	Massey-Harris-Ferguson (Sales) Ltd., (formerly named Harry Ferguson Ltd.)	52262, 52415
Maddox, F.	52228	Master Builders Co., The	48145
Madura Co. Ltd.	51145	Master, S. D.	47038, 52621
Maeder, H. Dr.	46944	Master Toys Industries	50581
M. A. F. Societe Civile D'Etudes Pour Materiel De Fonderie	47809, 47810, 49784	Mastini, D. Dr.	51514
Magnani, A.	46564, 51457	Mastracchi-Manes, G.	47671, 48116, 49655
Magnesium Elektron Ltd.	49253	Materiel Industriel, S. A.	50266
Mahalanabis M. Mrs.	52582	Mathias, B. P.	47858
Mahapatra, R.	51848	Mathur, L. B.	48093, 48094
Mahindra and Mahindra Ltd.	47723	Mathur, M. B. L.	47445
Mahulay, K. S.	47825, 50615	Mathur, R. N.	48093
Mahulay, M. C.	47825, 50615	Mathur, V. D.	48734
Maier, E.	48059	Matsumoto, Y.	49788
Maier, E. R. F.	53291	Maul, M.	47085, 47086, 48073
Mak Maschinenbau Kiel Aktienge- sellschaft	49284	Mavi, S. S.	51165, 51257, 51753, 52071
Malew Engineering Ltd.	50208	Mavor & Coulson Ltd.	46519, 46799, 47147, 47669, 48130, 48644, 48645, 48646, 48794, 52101, 52110, 52554
Malvica, S. B. Ing. Dr.	52616, 52740	Max Lejeune, Leon, Sylvain	46939
Manchee, R.	47891	May & Baker Ltd.	48668, 49502, 49689, 49690, 49863, 50405, 50406, 50407, 51642, 52676
Mangalji, B. D.	52653	Maybach-Motorenbau G. M. B. H.	52771
Manganese Chemicals Corporation.	48708	Mayer, F.	47799
Manheim Mfg. and Belting Co.	48963, 52172	McConnel Bombord Ltd.	47881
Manivannan, K.	46486	McConnell, D.P.	53230
Mannesmann Aktiengesellschaft.	47608, 50512, 51548	McConville, E.	50974
Mansuri, H. H.	49760	McCulloch, C. I.	47781, 50755
Mansuri, J. H.	49760	McGregor & Balfour Ltd.	52878
Mansuri, N. H.	49760	McGregor, D. D.	52878
Mansuri, Y. H.	49760	McPhar Engineering Co. of Canada Ltd., The	47622
Mantchev, M. I.	50332	Md. Y. Saha.	47792
Marchetti, C.	49962	Mechanical Products Inc.	46654, 46709, 47028, 47029, 47208, 47287, 47542, 47879, 50085
Marchon Products Ltd.	51347	Mefina S. A.	46628
Marconi's Wireless Telegraph Co. Ltd.	48604, 49321, 50222, 50478, 50972, 52315		45
Marcey, R. J.	51999, 52000, 53006		
Markham & Co. Ltd.	49327		
Marland, W.	50455		
Marshall's Tea Machinery Co. Ltd.	49564, 50655		
Martin, E.	52654		
Martin, H. G.	49574, 49949, 51597		

Names.	Register Numbers.	Names.	Register Numbers.
M—contd.		M—contd.	
Megator Pumps & Compressors Ltd.	48971, 51554	M. H. Detric Co.	48749
Mehra, G. E.	50042	Micanite and Insulators Company Limited, The	47843
Mehta, C. P.	48435	Microcell Limited.	50657, 51719, 51720
Mehta, J. J.	51971	Microcine S. r. L.	46999
Mehta, J. M.	50807	Midland Industries Limited	48129
Mehta, P. C.	49405	Midland Tar Distillers Limited, The.	52448
Mehta, P. M.	47312, 47410, 50452	Mikhudi Brothers.	51279
Mehta, S. A.	48829	Milind Patents	48329, 48330
Meiners Optical Devices Ltd.	47204	Miller, R.	48974
Meissner-Rub, M.	53042	Minemura, Y.	49788, 49808
Meissner, J.	46782	Mining Engineering Company Limited, The.	49866, 49867, 49868, 50086, 50508, 50509, 50547, 50842, 50843, 52302, 52422, 53050
Meller, E. A.	48990	Mira Zavody na pletene a Stavkove Zbozi, Narodni podnik	52469, 53428
Melville, A.	49455	Misra, K. N.	46567, 47149, 47584, 47701, 48257, 48294, 49413, 50579, 50580, 50712, 50933
Menon, C. K.	48952	Misra, R. N.	51587
Menon, V. K. G.	53373	Misra, Vidya (Miss).	48979, 49443
Menon, V. K. U.	46715	Mistry, B. M.	49012
Menrow Ltd.	52903	Mistry, P. C.	47139, 47627, 48606, 52632
Mentmore Manufacturing Co. Ltd.	51830, 52594	Mistry, R. H.	47576, 48104, 48140, 48331, 48343, 48348, 48349, 50503
Menzies, A. J.	47884	Mitchell Engineering Limited.	52584
Merchant, P. K. D.	48389, 48390	Mithel, B. B.	49915
Merck & Co., Inc.	47087, 47425, 48252, 48609, 50079, 50114, 50155, 50489, 50656, 51115, 51181, 51227, 51966, 52431	Mitra, A. K.	46632
Merry, C. B.	48003	Mitra, K. K.	53114
Messerschmitt, A. G.	50999	"M. K." Electric Limited.	47006
Metal Box Co. Ltd. The.	47822, 51792, 53237	Modi, N. L.	51280, 53026
Metal Box Co. of India. Ltd., The.	48347, 48362	Moebelfabrik Westfalia H. Rottmann.	47276
Metalcraft (India) Limited	53336	Moen, A. M.	47874
Metallgesellschaft Aktiengesellschaft.	46553, 46554, 47743, 47932, 48791, 51031, 51190	Mohahan, L. C.	52202
Metallgesellschaft Aktiengesellschaft Societe Des Societes De Longway	49459	Mohajir, A. (Miss).	49178
Metalrax Limited.	47851	Mohd, Khalil.	47698
"METAPIC" S. A.	50306, 50307, 50308, 50309, 50310, 50311, 50312, 50313, 50314, 51185, 51186	Mohidin, P. S.	51132
Metron Warme-und Messtechnik Gustav Griesel K. G.	48728	Mohile, V. A.	53215
Metropolitan-Vickers Electrical Company Limited	46482, 47975, 47986, 48783, 49497, 49597, 49842, 50006, 50427, 50585, 50675, 52134, 52261, 52294, 52313, 52327, 52560, 52585, 52750, 52919, 53184	Mokerji, A. K.	47071
Metropolitan-Vickers-Gra Ltd	49420	Molins Machine Company Limited	47872, 47873
Meutsh.	48852, 49010	Molnar, L. P.	49794
Meyer, E. V.	47281	Momin, A. U.	52042
Meyer, J. R. Dr.	52750	Mona, B. E. N.	52874
		Mond Nickel Company Limited, The	46570, 47007, 47033, 48884, 48885, 49874, 49875, 52392
		Monitor Engineering and Oil Appliances Limited	46641
		Monk, E. T. S.	48004, 52768
		Mono Pumps Limited	49304

Names.
Register
Numbers.

M—contd.

Monotype Corporation Limited, The	46573, 47374, 48011, 49028, 49855, 50367, 51738, 53162
Monsanto Chemical Company	46904, 46905, 46906, 47094, 47845, 48610, 48757, 49476, 50184, 50185, 50608, 51070
Monsanto Chemicals Ltd.	46629, 48809, 49914, 50175, 50506, 50818, 51370, 51903, 52590, 52952, 53096
Montecatini, Societa Generale Per L'Industria Mineraria E Chimica	49088, 49197, 49532, 49812, 50619, 51126, 51582, 51804, 51925
Mo Och Domsjo Aktiebolag	51152, 51153
Mookerjee, A. K.	47487, 49783
Moolchand, L.	51691
Mooljee Sicka and Company	47758
Moolji, A. G.	50781
Moorthy, K. N.	47999
Morgan Fairest Limited	52655
Morgardshammars Mek. Verkstads AB	51735, 51736
Morphy-Richards Ltd.	47114
Morren. H.	46725, 48958, 52009
Morr, H. Dr.	51378
Morris, J.	52904
Morris Motars Ltd.	49381, 49382, 49388, 49398, 50347, 51043
Morton, D. B. (Junior)	49486
Morton, D. B. (Senior)	49486
Morton, G. E.	49486
Moser, Hans H.	51482
Motha TruInstitut	52566
Motherwell Bridge & Engineering Co., Ltd., The	48450, 48682
Motoren Werke Mannheim A. G. Vorm Benz Abt. Stat. Motoren- bau,	51881, 51882, 51883, 52024, 52025, 52026,
Mousell & Co. Ltd.	48477, 48505
M-O Valve Company Limited, The	51052, 52097, 52514
Movor & Coulson Limited	52101
Moyroud, L. M.	48683
Mudaliar, T. A.	52219
Mudd, D. P.	50937, 51501, 51502
Mudliar, K. N.	52743
Mukerjee, P. C.	46522
Mukherjee, S.	46477
Mukherjee, S. L.	46731, 46767, 46797, 48770, 48771, 48839, 49580, 49581, 49798, 50925, 51175, 51208

Names.
Register
Numbers.

M—contd.

Mukherjee, T. K.	53391
Mukherji, S. K.	48573, 48574, 48586
Mulji, A. G.	46577, 46630, 46668
Mulka, F.	47001
Mullen, T. M.	48243
Mullen, W. G.	52406
Muller, M. M. A. G. N.	51544
Mulvaney, J. L.	50194, 51911
Munekata, E.	46835, 47650, 47724
Munir, J. A.	48961
Muniswamappa, N.	50109
Murphy Chemical Co. Ltd., The	47984, 49889
Murphy Radio Ltd.	50659
Murray, J. B.	50908
Murti, G. S.	59034, 51088
Musetti, A.	46502
Myard, F. E.	50450
Myhre, W.	50197, 52292
Mysore Chemicals Ltd.	48691

N

Naamlooze Vennootschap P. F. Van Vlissingen & Co.'s Katoenfab- rieken	46836
Naamlooze Vennootschap Valevefa	48502
Naamlooze Vennootschap W. A. Scholten's Chemische Fabrieken	51549, 51590
"Naan" Keutzat Hanoar Haoved Lehityashvut Shitufet Be'Eravon Mugbal	50586
Nabar, G. M. Dr.	48620
Nadel, A. Dr.	49193
Nagaraja, A.	46792,
47219, 47220, 47221, 47222, 48856, 50467	
Nagarkar, L. S.	48388
Nagel, J.	49508
Nagesh, N. G.	52589
Nagree, I. E.	50333
Nagree, Y. E.	50900
Nagri Mining Company, Ltd.	51441
Nagynyomasu Kiserleti Intezet	53233
Naidu, M. V.	50172
Nair, A. P. M.	50532
Najjor, Joseph-Yervant Michel	51480
Nakajima, T.	49788
Nakano, Y.	47724
Nakken, T. H.	51466
Nandy, Kalipada	51576
Nanoty, P. S.	51394
Naphtol-Chemie Offenbach	48364

Names.	Register Numbers.	Names.	Register Numbers.
<i>N—contd.</i>		<i>N—contd.</i>	
Narayanamurti, D.	47411	Nijhawan, R. K.	50958
Narayana, N. Dr.	47946, 50765	Nilakhe, S. N.	49770
Narodni Podnik Mira	53306	Nippon Denshin Denwa Kosha	48940
Nascher, H. R.	47478	Nitta, K.	48182
Nash, H. R.	47269	Nock, J. L.	50542
Natarajan, P. S.	47056	Noranda Mines, Ltd.	47423, 47527
Natarajan, V. S.	49348	Nordisk Insulinlaboratorium	47047, 47048 48379
Nathan, P. V.	49423	Nordmark-Werke GMBH	49482, 50490, 50893
National Aluminate Corporation	47968, 48686	Nordviste, I.	50323
National Lead Company	49265, 49731, 50353, 50891, 51229, 51440 51648, 53386	Norris Motors Ltd.	49398
National Malleable and Steel Cas- tings Company	46642, 49066, 49291, 50597, 51425, 52037	Norsk Hydro-Electrisk Kvaelsto- faktieselskab	50903, 51246, 51920, 52086, 52165, 53063
National Motor Bearing, Co. Inc.	50481, 50482	North American Aviation Inc.	48192, 48337
National Moulding Co. Ltd.	48086, 50680	North American Rayon Corpora- tion	53034
National Rayon Corporation Ltd., The	51971	North Thames Gas Board	46897
National Research Council	47933	Nossen, Ernest S.	51991
National Research Development Corporation	46480, 47333, 47357, 47358, 47448, 47606, 47892, 47896, 48400, 48523, 49688, 50050, 50093, 50474, 50610, 51228, 52044, 52298	Nottaris & Wagner	53036
National Smelting Company Ltd., The	49711 51071, 51407, 51604, 51827, 52545, 52795, 52829	Novo-Plast G.m.b. H.	50000
Natonek, R.	52063	Novo Terapeutisk Laboratorium A/S.	47472, 49297, 50215, 51652, 52820
Natural Vision Corporation	49494	Nowak, R. Dipl. -Ing	52320
Nayagar, K. V.	47742, 48256	N. P. Metal Industries	50484
Nayak Kumbha Shantharama Mukunda	53182	Nsu Worke Aktiengesellschaft	48049
Neal, J.	47811	N. V. Amsterdamsche Maatschappij Tot Exploitatie Van Octrooien	49676
Nebont, N.	52059	N. V. Appleton Pty. Ltd.	49538
Nederlandse Centrale Organisatie Voor Toegepast Natuurwetens- chappelijk Onderzoek	48180, 49691, 51945	N. V. Bronswerk	51893, 51894
Negishi, E.	49410	N. V. Chemische Industrie "Rids"	49691
Neidhart, H.	48013, 48147 50289	N. V. De Bataafsche Petroleum Maatschappij	46752, 47466, 47572, 47618, 47654, 47687, 47767 47768, 47812, 47861, 47904, 47905, 48142, 48234, 48511, 48589, 48660, 48661, 48679, 48707, 48742, 48790, 48948, 49217, 49272, 49365, 49465, 49491, 49551, 50087, 50299, 50327, 50380, 50521, 50685, 50992, 51536, 51565, 51775, 51963, 51987, 52088, 52248, 52418, 52583, 52660, 52697, 52767, 52787, 52839, 52951, 52965, 53010, 53158, 53201, 53223, 53275, 53315, 53334.
Nepera Chemical Co. Inc.	50707	N. V. Koninklijke Pharmaceutische Fabrieken v/h Brocadesstheeman and Pharmacia	51194
Nerath, O.	48981	N. V. Lak-, Vernis-En Verffabriek Molyn & Co.	47945
Netelenbos, W. J.	47633	N. V. Lemet Industrie	50756
New Castle Products, Inc.	52089		
Neyrpic Portuguesa, Lds.	49142		
Niccolini, U.	47205		
Nichols, E. B.	53154		
Nickerson, W. J.	50320		
Niehans, P. Dr.	48268		
Niemann, G. Ing. Dr.	48181		
Nigam, B. K.	52940		
Nigos Corporation	51146, 53081		

Names.	Register Numbers.	Names.	Register Numbers.
N—contd.		O	
N. V. Maatschappij tot Exploiteren van Octrooien en Licenties "Matepa"	48758	Oerietfabriek N. V.	51085
N. V. Onderzoekingsinstituut Research	47239	Oesterreichisch-Alpine Montangesellschaft	46894, 46895 52326, 52467
N. V. Ontwikkelingmaatschappij Multinorm	53156	Oetikar, H.	48465
N. V. Philips' Gloeilampen fabrieken	46468,	Oetiker-Motor-bremzen A. G.	49481
46469, 46503, 46507, 46508,		Ogale Glass Works Limited	52387
46540, 46591, 46592, 46721,		Ogg, R. A. (gr).	49666
46967, 46968, 47003, 47004,		Ohmes, C.	47292
47005, 47101, 47144, 47145,		Oka, G. G.	53292
47146, 47157, 47158, 47159,		Oldham & Son Limited	46971, 46972 51997
47160, 47189, 47190, 47278,		Olympia Werke Aktiengesellschaft	50077, 51137, 51513, 52004
47471, 47511, 47512, 47513,		Olympia Werke West G. m. b. H.	49657, 49661, 49662, 49926, 50459 50488, 50555
47514, 47515, 47516, 47517,		Omnium Trust De La Construction (Otruco), Societe Anonyme	46657
47604, 47605, 47734, 47746,		Om Prakash	51635
47747, 47748, 47749, 47750,		Ontario Research Foundation.	48033, 48858 50795
47751, 47893, 47894, 47907,		Opavsky, W.	46985
47908, 47909, 47910, 47911,		Opfermann, A. C. J.	52341
47912, 47913, 47914, 47915,		Opferman, A. C. T.	50264, 50265
48066, 48067, 48068, 48069,		Organnon Laboratories Limited	48538, 49375 49534 51036, 52240, 52617
48070, 48321, 48322, 48323,		Orgryteverken Aktiebolag	51295
48324, 48361, 48382, 48383,		Oriental Engineering Works	46488
48384, 48470, 48471, 48472,		Orr & Sembower, Inc.	53360, 53361
48473, 48474, 48541, 48542,		Ortho Pharmaceutical Corporation	49141, 50344 50522, 50860, 51486, 51741
48596, 48597, 48663, 48710,		Osaka Aluminium Works Ltd. Tho	52150, 53146
48750, 48781, 48853, 49209,		Osame, G.	51984
49210, 49211, 49212, 49222,		Osborne, F.	49374, 53258
49223, 49255, 49256, 49306,		Osborne, H. G.	47202
49307, 49386, 49469, 49831,		Oskar Biegel G. m. b. H.	52242
49936, 50104, 50232, 50394,		Osler Electric Lamp Manufacturing Co. Ltd. The	48038
50423, 50424, 50425, 50426,		Osmani, R. (Miss)	51701
50526, 50527, 50528, 50529,		Ostendorf, P.	48370
50599, 50733, 50742, 50743,		Osterreichische Textilmaschinenfabrik G. Josephy's Erben	48916
50744, 50762, 50995, 51012,		Otger, M.	47633
51033, 51034, 51057, 51058,		Otis Elevator Company	53302
51105, 51215, 51239, 51240,		Overton, G.	48651
51286, 51356, 51357, 51358,		Owens-Corning Fiberglas Corporation	49660, 50591 51568
51413, 51789, 52052, 52053,		Ozai-Durrani, A. K.	51973, 52645
52175, 52204, 52205, 52206,		Ozalid Company Limited	51540, 51541
52231, 52232, 52256, 52257,			
52258, 52288, 52384, 52395,			
52413, 52414, 52439, 52440,			
52577, 52646, 52647, 52689,			
52690, 52764, 52780, 52863,			
52907, 52925, 52975, 52976,			
52998, 53208, 53089, 53090,			
53091, 53163.			
N. V. "Tervalon" Maatschappij Voor Voedingsmiddelen op Wetenschappelijke basis (Scientific Food Co.)	49735		
N. V. Tot Aanneming Van Werken Voorheen J. J. Nederhorst	47703		
N. V. Werf Gusto Voorheen Firma A. F. Smulders	51583		
N. V. W. H. Van Den Toorn's Industrieele Ondernemingen Capsule fabriek. "Holland"	49740		
Nyegaard & Co. A/S	46953, 50808		

Names.	Register Numbers.	Names.	Register Numbers.
P		P—contd.	
Pacific Mills	46802	Patel, H. C.	49373
Packman, P. J.	49984	Patel, J. J.	46677,
Padhye, G. V.	51539	48736, 48737, 49991, 49996,	
Padiou, G. S. G.	49140	50211, 50681, 50822, 53250	
Padshah Brothers	52209	Patel, J. M.	48973, 51013
Page, V. J.	52499	Patel, M. M.	47617
Painter Brothers Ltd.	50542, 53175	Patel, M. N.	50732
Pakco Engineering Ltd.	49378	Patel, M. R.	51653
Pal, Benjamin Peary, Dr.	51574	Patel, V. H.	51672
Palmer, B. W.	47330	Patentes Talgo, S.A.	46887,
Palshikar, K. N.	47069	49091, 51445	
Pamani, R. G.	47559	Patents and Investments Ltd.	51588, 51740
Panalal Silk Mills Ltd., The	52849	Paterson, W.	52332
Panchal, B. L.	48061	Patin, P. C.	53447
Panchal, I. K.	46501	Patira, C. T.	48897, 50097,
Pamchal, P. B.	51013	50166, 50167, 50210,	
Pandkar, S. B. Mrs.	49872	51075, 51308, 51324	
P. & M. Co. (England) Ltd., The	47371	Patricia Dennis Brassieres, Inc.	49523
Panse, R. D.	48178	Pattacheril, P. P.	50174
Paranjape, V. K.	48377	Paul Brij	51281
50237, 50238		Paul, S. K.	49848
Pardesi, I. S.	47938	Pavri, D. P.	49919
Parekh, I. G.	48010	Payne, W. H.	49243
Parekh, M. D. Dr.	51971	Pearce, H.	46650
Parikh, C. D.	52619	Pearl Varnish Company Ltd.	50294
Parikh, H. L.	47077	Pearson, H.	47096
Parikh, M. M.	48152, 50111	Pechiney Cie de Produits Chimi- ques et Electrometallurgiques	48612, 48672
Parishat, V.	47941, 51428,	Pechiney Compagnie de Produits Chimiques et Electrometallur- giques	51663
52734		Peck, L.	49878
Parkash R.	52115	Pedersen, P. S.	52654
Parkash, S.	48618	Pedersen, P. S. Jr.	52654
Parke, Davis & Co.	46849, 46903,	Pendar, K.	48460
47186, 47187, 47632,		Pendse, M. K.	50966
47718, 47719, 47923, 48083,		Penfold, E. J.	51752
48143, 48354, 48355, 48356,		Penn. O. S.	47556
49130, 49483, 49871, 50100,		Pensabene, N.	47081
50433, 50434, 51006, 51007,		Perez, L. S.	47391, 47392, 47393,
51008, 51009, 51010, 51011,		50282, 52074, 52296	
52862		Perfogit Societa Per Azioni	46772, 47388,
Parker, C. S.	49455	47528, 47539, 47555,	
Parker, F. W.	51442	47725, 47726, 48208, 48290,	
Parker-Knoll Ltd.	46883	48291, 48642, 48741, 49117,	
Parker Pen Co., The	49047,	49163, 49167, 49168, 49694,	
51828, 52432, 53353		49695, 49774, 49946, 49947,	
Parks Cramer Co.	49850	50036, 50451, 50968, 51069,	
Parlanti, C. A.	52529	51232, 51376, 51807, 52503,	
Patankar, B. V.	46514,	53069	
47390, 48698, 52762		Perlman, T.	47381
Patchett, G. W.	49598	Permutit Co. Ltd., The	47886, 48207,
Patel, A. S.	47598	48571, 50779, 51198	
Patel, B. C.	53260	Pertrix-Union G. m.b.H.	48997,
Patel, G. G.	49442,	49412, 50082, 51744, 52225,	
49412, 49447		52241, 52721, 52991, 53103	
49449, 49454			

Names.	Register Numbers.	Names.	Register Numbers.
<i>P—contd.</i>		<i>P—contd.</i>	
Pest Control Ltd.	47270, 49105, 49106, 49737, 50747, 50962, 51729, 52518	Pollet, A. G.	48276
Petcho, J.	49723	Polnauer, F. F. Dr.	48916
Peterhans, J.	50261	Polygram Casting Co., Ltd.	47500 47501, 47502, 47519, 47976, 50039, 50040, 51156, 51332, 53408
Peterlite Products Ltd.	51929	Ponkshe, Satyawrata Swamirao	51089, 51269, 51288
Peters, A. R. Major	49270	Ponkshe, Shivaram Swami	51089, 51269, 51288
Petersen, G. A. M.	52553	Ponnusamy, M.	48933
Pfistershammer, J.	50884, 51577	Ponnuthamby, A. E.	47699
Phadnis, V. B.	48919	Poole, A.	52638
Phalke, P. D.	49120	Poonamchand & Brothers Ltd.	48245
Philip, M. C.	52722	Popper, K.	50492
Philip Morris and Co., Ltd., Inc.	52493	Popp, K.	48308
Philipp Holzmann Aktiengesellschaft	53021	Porsche, K. G. Dr. Ing., H. C. F.	48882
Phillips, E. D.	51336	Portable Babers, Ltd.	50222
Piarotto Man-Nem-Hitsu Kabu- shike-Kaisha (In English Pilot Pen Co., Ltd.	53116	Porta, L. A. Dr.	48637
Picalarga, M.	50557	Portasilo Ltd.	51993 52023, 52271
Picciati, A.	52187	Porter, G. I. M.	46878
Pickard, H. M. H.	46868	Potasse & Engrais Chimiques Societe Anonyme	47340, 47696
Pickfords (South Africa) Ltd.	48072	Poudrieres Reunies De Belgique S. A.	47340, 47341
Pienaar, T. M. S.	47434	Powell, E. J. F.	53367
Pierwood Plastics Ltd.	47507	Powell, J. W.	49937, 51158
Pilkington Brothers Ltd.	47449, 47663, 48402, 48582, 46965, 50286, 51386, 52226, 53289	Power Jets (Research & Develop- ment) Ltd.	46726, 46912, 47252, 48044, 48272, 49245, 49593, 49873, 50479, 51594
Pillai, K. K. K.	47560	Powers-Samas Accounting Machines Ltd.	48160, 49715, 49939, 50360, 50534, 51143
Pillay, B. P. S.	47804, 51176, 51209	Prachi Industries Ltd.	47319
Pilo, C. W.	52480	Prakash, J.	52825
Pinchin, Johnson & Associates Ltd.	48514	Prakash, O.	51635
Pirelli-General Cable Works Ltd.	48030, 50990, 53082	Prakassarao, Y. S.	48890, 51761
Pischeck, F.	49967	Prasad, D.	47429
Pitamerdas, P. S.	52653	Prasad, G.	51587
Pittsburgh Consolidation Coal Co.	46510, 46511	Prasad, R.	53368
Pittsburgh Plate Glass Co.	51122, 52935	Precision Processes (Textiles) Ltd.	48731
Plasco Ltd.	47225	Premier Electric Heaters Ltd.	51876
Plastic and Industrial Corpora- tion Ltd., The	48947, 49518, 49865, 50899, 52162	Premo Pharmaceutical Laborato- ries, Inc.	48483
Plastik Universal Soc. p. Az.	49042	Prendergast, C. S.	48174
Platex (Pty) Ltd	53232	Pressed Steel Gar Co., Inc.	46811, 47119
Plenderleath, J. S.	52953	Preussische Bergwerks-Und Hutten Aktiengesellschaft	49722
Plesnik, I.	53025	Price's Patent Candle Co. Ltd.	47404
Pointer, R. W.	48281	Prince Smith & Stells Ltd.	49955
Pokorny, E. A.	49290	Procter and Gamble De Mexico S. A. De C. V.	51454
Polak & Schwarz (England) Ltd.	48360		
Pollard, A. L.	52284		

Names.	Register Numbers.	Names.	Register Numbers.
P—contd.		R—contd.	
Pullman Spring-filled Co. Ltd.	50336	Ranade, G. S.	53074
Pulp and Paper Research Institute of Canada	49190	Ranade, R. Y.	47377, 47384
Puri, G. G.	48100	Rana, S. N.	51550, 51853
Puri, Prakash Kumar	49554	Randall, N. G.	48482
Purolator Products, Inc.	48350, 48359, 48869, 38983	Ranky, B.	48842
Pusalkar, B. V.	48206	Ranney Method Water Supplies, Inc.	48393
Putzer, H.	48666, 49533	Rao, B. R.	46620, 47800, 48105
P. Von Arx & Co. A. G.	50002	Rao, D. R.	47054
Pyral	47141	Rao, G.	51018
Pyrene Co. Lt., The	47299, 47443, 47592	Rao, G. R.	51754
		Rao, H. K.	52268
		Rao, G. J.	53300
		Rao, K. R.	52386
		Rao, L. R.	51429
		Rao, M. M.	51627
		Rao, M. S. M.	47132
		Rao, P. A. M.	51450
		Rao, P. H.	51967
		Rao, P. V. S. P.	47433
		Rao, S. N. G.	51710
		Rao, S. S.	47285, 51004, 51005
		Rapid Metal Developments Limi- ted.	48457
		Ras, M.	48352
		Ras, M. Dr.	48404
		Ratelband, J. B.	47790
			47791, 51727
		Rau, K. S.	49706
		Rausing, R.	47282
		Rauter, R.	50949
		Raval, B. V.	52619
		Rawlplug Company Limited, The	53448
		Rawls, V.	46538, 46970, 47927
		Rayalaseema Constructions	48228
		Ray, J. D.	49666
		Ray-O-Vac Company	47936
			48006, 48216, 49089, 49595
		Read, A. E.	47565
		Readymoney, B. J.	53267
		Readymoney, P. D.	53267
		Rebello, D. Dr.	48405
		Rector of the Loyola College	50759
		Reddi, A. G.	53311
		Reddi, A. C. K.	52620
		Reddi, A. V.	46775, 46776, 46861, 50935
		R. E. Eagan Limited	47653
		Reggiani, P.	51202
		Regoma Co. Ltd.	50013
Q			
Quasi-Arc Co. Lt., The	50902		
Quebec Metallurgical Industries Ltd.	47690		
Qureishi, M.I.	49468		
R			
"RADE KONCAR" Tvorca Elektric- nih Strojeva	52345		
Radicati, G.	47072		
Radio Corporation of America	47009, 48607, 48762, 48926, 49539, 50024, 50354, 50369, 50524, 51267, 51901, 52143, 52347, 52468, 52511, 53511, 53109, 51553, 52019,		
Rado, L.	49154		
Raina, T. M.	52381		
Rajagopalan, M.	49362, 49684		
Rajendran, T. M.	49682, 49683, 52901, 52902		
Rajnai B.	50906		
Raleigh Cycle Company Limited, The	52396		
R. A. Lister & Co. Ltd.,	53442		
Ramachandran, S. Capt.	51888		
Ramakrishna, H. V.	48163		
Ramamurthy, S.	53051		
Ramamurthy, T.	47474, 51481		
Ramaniah, S. V.	48058		
Ramarao, G.	46736		
Ramaswamy, K. N.	50466		
Ramdas, M.	50798, 51909, 51910		
Ram, D. J. Dr.	48387		
Ram, J.	53259		
Rampery C. N. S.	51280		
Rampery, N. S.			

Names.	Register Numbers.	Names.	Register Numbers.
<i>R—contd.</i>		<i>R—contd.</i>	
Reichstein, T. Dr. Prof.	50022, 50136, 50328, 50559, 51149, 51218, 51219, 51259, 51359, 51360, 51448, 51449, 51495, 51596, 52084	Robert Haldane and Company Ltd.	48821
Reiter, R. C.	49185	Roberts, D. S.	51255, 51661
Rempel Manufacturing Canada Ltd	46603	Robertson, J.D.	52137
Reonold and Coventry Chain Com- pany Ltd., The	47651, 48575	Robertson Thain Limited	50854
Research Corporation	46543	Robertson, W.	52900
Resilla Cots and Rollers Ltd.	50823, 52593	Robinson, F. G.	47775
Reutter, J. L.	49643	Rochat, J.	50448
Revertex Limited	52048, 53150	Rockwell Manufacturing Co.	50945
Revo Electric Co. Ltd.	49785	Rocla Pipes Ltd.	47354, 47355, 48551, 48552, 48553, 49124, 51656, 51657, 51658
Reynolds Metals Co.	47871, 50387	Rodi & Wienenberger Aktiengesel- lschaft.	47165, 50322, 50326
R. F. Warry Ltd.	48409	Rohm & Haas Co.	52251
R. G. LeTourneau, Inc.	46494	Rohtas Industries Ltd.	50716, 50717
Rheinbau G. m. b. H.	53351	Rola Co. (Australia) Proprietary Ltd.	51687
Rheinpreussen Aklengesellschaft fuer Bergbau und Chemie	48260, 48301, 48302, 48303, 48304, 48305, 48306, 48307, 50917, 50918, 51027, 51131, 51362, 51363, 51620, 51868, 51954, 52163, 52343, 52876	Rolladenfabrik A. Griesser A.-G.	48297, 51342
Rheno, A. G.	52887, 52912	Rolles, R. R.	51498
Rhondda Plating Works Ltd.	49000	Rolls-Royce Ltd.	50517
Ricardo & Co. Engineers (1927) Ltd.	50463, 50653, 53101	Romac Industries Ltd.	50679
Richard Haworth & Co., (Manufac- turing) Limited	52038, 52039	Rommel, M.	50146
Rich, S. R.	47275	Ronald Trist & Co. Ltd.	47325
Ridley, J. C.	51506	Roneo Limited	46852, 52301
Riess, F. E.	52595	Ropeways Ltd.	48774
Riha, M. G.	47161	RO-SEARCH, Inc.	51737
	47977, 47978, 47979, 49357	Roshan Industries Ltd.	51927
Riker Laboratories, Inc.	48239	Roskilde Medical Co. Ltd., (R.M.C.) (Danske Andelsslagteriers, Kon- servesfabrik, A. N. B. A.)	52436
Rinckhoff, J. B.	59015	Rosner, E.	51236
Ringdahl, K. G.	48711	Rossiter, G. W.	48431
Ringdal, L.	52164	Rotary Hoes Ltd.	48684, 51015, 51217, 51961
Ringstrom, M. J. (Miss)	51151	Roth, W.	47275
Ritzerfeld, G.	47624, 47693, 50003, 50250	Rottcher, K. K.	50355
	47386,	Roulements A Billes Miniatures S. A.	49631, 50840
Ritzerfeld, W.	47624, 47693, 50003, 50250	Rovert Aebi Cie A. G.	50402, 50403
Rivofficine Divillar Perosa Societa Per Azione.	48018	Roy, J. V.	48459, 49890, 50110, 50262, 50263, 50663
Road Machines (Drayton) Ltd.	49311, 49312, 49390	Roy, S. K.	51147
Robbenhaar, J. G.	47633	Roy, S. M.	50702
Robb, W. M.	49311, 49312, 49390	Royston, D. B.	50271
Robert Aebi & Cie, A. G.	50402, 50403	R. Soderberg & Co. Aktiebolag	50722
Robert Bosch G.m.b.H.	46563,	Ruberoide Company Limited, The	51659
	46960, 47397, 48020, 48021, 48090, 48832, 48922, 49293, 49651, 52031, 52032	Rubery, Owen & Co. Ltd.	52718
		Rud, Furrer Sohne A. G.	52539, 52665
		Rudman, Darlington & Co. Ltd.	50218

Names.	Register Numbers.	Names.	Register Numbers.
R—contd.		S—contd.	
Rudolf Blik Electricche Apparaten- En Metaalwarenfabriek N. V.	48091	Sandford, W. H.	50791, 50792 51045
Rudorff, D. W. A. F.	47322	Sandoz, A. G.	51837, 51781, 51790, 52227, 53212
Ruetz, J.	46980	Sandoz Ltd.	51806
Ruetz, K.	46886	S. & R. J. Everett & Co., Ltd.	47736, 50458, 50642
Ruhrchemie Aktiengesellschaft	46483	Sanghi, A.	46812, 50870, 51323
46927, 47013, 47051, 47075, 47244, 47373, 47645, 47646, 47793, 47794, 48080, 48166, 48167, 48168, 48358, 48704, 48788, 49637, 51571, 51889, 52755, 52786, 52980, 49992		Sankey, M. M.	52959
Ruhrigas Aktiengesellschaft	49992	Sanyal, S.	50118
RUMIANCA Societa per Azioni	51782	Sark, A. I.	50607
Runchhoddas, P.	48247	Sarker, P. N.	46801, 49591, 50243
Ruparel, G. W.	48980	Saroup, B.	48186, 48187
Rusch, G. O. K.	48027, 48028, 48029, 50037	Sastry, Pandit Govind	46710, 46711, 46712, 46765, 46766
Russell Constructions Ltd.	50641	Sato, I.	49788
Russell J. F. Jr.	51375	Satya Industries Ltd.	52804
Russell, J. G.	48328, 53249	Saunders Valve Co., Ltd.	46520, 51849
Russo, B.	50492	Saurefabrik Schweizerhall	46664, 47289, 47640, 47771
Ruston-Bucyrus Ltd.	46977, 52192, 52462, 52591, 52662	Saval, A. B. (Master.)	47940, 49511, 49881
S		Savur, G. R. Dr.	53320, 53429
S. A. Arnaldo Vigorelli	51086	Sawalka, R. N.	50460
S. A. De Procèdes Mecaniques Et Textiles Sapro	47127	Sawyes Inc.	53413
Sadolin & Holmblad A/S	53236	Saxton, S. A.	51506
Sadub Societe Holding De Valeurs, Brevets Du Proprieter	52571	Scaffolding (Great Britain) Ltd.	48581
Safca Fillings Ltd.	50018	Scammell Lorries Ltd.	46925, 51743
Sagami Gomu Kogyo Co., Ltd., The	50986	Schatzchock, A.	50156, 52910
Saggu, B. S.	49280	Schauberger, V.	47365
Saggu, T. S.	47588	Scheeller-Bleckmann Stahlwerke Aktiengesellschaft	48550
Saha, J. M.	47227, 48795, 50604, 51164	Schering, A. G.	49334, 49930 53130
S. A. I. C. A. Societa Anonima Ita- liana Colori Affini	49630, 53206	Schering Corporation	47294, 48831
Sain, G.	49226, 49999	Schiess Aktiengesellschaft	49004
Saint Freres, Societe Anonyme	46778, 46779	Schlage Lock Co.	49558, 49933
Sakamoto, K.	48632, 48633, 48634, 49832, 49833, 51586	Schlumberger Overseas. S. A.	46529, 46530
Sakunwadhna, C.	50499	Schlumberger Well Surveying Cor- poration	46513, 47395, 47396, 48945, 49544, 49972, 51188, 51436, 51926, 52556
Saladin & Co.	51104	Schmid, A.	53190
Saletore, S. A.	48934, 51816	Schmidt, W.	49775, 49776
Salopian Engineers Limited	50953	Schmoller, F. V. Dr.	49018
Salzmann, W. E.	47944	Schnellpressenfabrik schaft Heidelberg	52618, 53238
Samsi, B. V.	49358	Schnyder, O.	51942
Samtani, D. K. Mrs.	52477	Schobelt, R.	53164
Sanders, A. F.	51994	Schofield, C. S.	47163, 49452
Sanders G. G.	49330	Schobl, A. G.	49446
		Scholler, H. Dr. Ing.	50428
		Scholven-Chemie Aktiengesellschaft	53415
		Schondelmaier, C.	53394

Names. Register
Numbers.

S—contd.

Schrader, H. Dr.	50798
	51909, 51910
Schwander, L.	48268
Schwanhauser & Co., K. G.	51468
Schwarz, J.	47045, 47046
Schweizerische Isola-Werke	48074
Schweizerische Lokomotive Und Machinenfabrik	51451
Scientific Oil Compounding Com- pany Inc.	46614, 53030
Scindia Steam Navigation Company Limited, The	50442, 50443
Scottish Machine Tool Corporation Limited.	51745
S. Daji & Company, Ltd.	49619
S. D. Garbis & Co.	47869
S. Dodd & Sons Ltd.	52897, 52898
Sebasteen, Z.	50274
Secotan, Inc.	50969
Secoterm S. A. de C. V.	49017
Secretary to the Government of the State of Madras (Public Works Department).	47919
Seel, E.	49905, 49906
Seetru Limited (formerly known as Seetru Products Limited).	50763, 51059, 51670, 52211
Seki, N.	49788, 49808
Selwayn, J. F.	49035, 49397
Semtex Limited.	49703
Sen, A. K.	50987
Sen, Binayendra Nath,	49618
Sen, D.	50348, 53052
Sendel Limited.	48203, 48204
Sengupta, Manoranjan	51025
Sen Gupta, M. L.	47541,
Sen Gupta, Nani Gopal	49766
Sengupta, S.	46855, 46918
Sen Gupta, Supriya Mohan	50772
Sengupta, T.	46477
Senior, K.	52970
Sen, N. K.	49568
Sen, R. C.	48439
Sen, Sudhir	48427
Setright Registers Limited.	49316
Seville, J. R.	48466
Shackleton, W.	48700
Shafer, R. E.	52698
Shah, B. C.	51899, 51900
Shah, K. K.	48025, 48444
Shah, Md. Y.	47792
Shah, N. H.	50160
Shah, N. M.	52923

Names. Register
Numbers.

S—contd.

Shah, N. S.	47247
Shah, R. M.	50229
Shammugam, G.	50236
Shamrao, P.	46569
Shamsie, S. M.	50776, 50793, 51307, 51924
Shaparia Dock & Steel Co., Ltd.	51567
Sharda, M. L.	49952
Sharmam, B. N.	47256
Sharma, D. P.	48092
Sharman, A. V.	47006
Sharma, N. R.	51662
Sharma R. P.	47178
Sharp & Dohme, Incorporated.	46498, 46777, 47248, 47249, 47250, 47251, 48084, 48609
Sharples Corporation, The	51768
Shastri, G. Pondit	51018
Shawinigan Water and Power Co., The	51291
Shaw, M.	49001
"Shell" Refining and Marketing Company, Limited.	47140, 47506, 47636, 47769, 47786, 47995, 48209, 49027, 49769, 50029, 50475, 51566, 52349, 52964
"Shell" Research, Ltd.	50027, 50028, 50030, 52169, 52574, 53125
Sherritt Gordon Mines Ltd.	48157 49341, 50847
Sheth, J. M.	47247,
Shikoku Kasei Kogyo Kabushiki Kai- sha	53214
Shimwell, D. W.	47601
Shirakawa, K.	49788
Shivadasani, M. A. Mrs..	52375
Shivaji Works Limited.	49847, 50007, 50192, 53329
Short, R. P.	53111
Shree Krishna Ltd.	50626
Shri Dhar	49599, 49990, 52524, 52525, 52526, 52652
Shri Ram.	52588
Shri Ram Institute for Industrial Research	46685
Shrivastava, S. S.	50444, 50445
Shroff, R. P.	50057
Shunmugam, C.	46724, 48041
Shyamlal	53136
Siddiqui, S. Dr.	49402, 49403
Sidhu, H. S.	51773, 51774, 51843, 52062, 52233, 52249
Siemen, O.	49679

Names.	Register Numbers.	Names.	Register Numbers.
<i>S—contd.</i>		<i>S—contd.</i>	
Siemens & Halske Aktiengesellschaft.	49114, 49115, 49471, 49472, 49674, 50033, 51287, 52073, 53183	Sivola, Y.	46689
Siemens Brothers & Co. Limited	46717, 47154, 48056, 48057, 48097, 49733, 50738, 50754, 52378	Skanska Cementaktiebolaget	52346
Siemens-Schuckertwerke Aktiengesellschaft.	47935, 51061, 52766, 52892	SKF Kugellagerfabriken Gesellschaf mit beschränkter Haftung	48421, 48422, 48951, 48969, 51014, 53169, 53170, 53171
Silberstein, V.	47440	Skylux Limited.	53409
Silva, S. S.	53222	Slasto Co. of Africa (Pty.) Ltd.	50200
Silver Engineering Works Inc.	50349	Smalley, L.	50665
Simmonds & Stokes (Niphan) Ltd.	51264, 52185	Smith and Westwood Limited.	47665
Simon-Carves Limited.	49495, 50464, 51406, 52109, 52363, 53446	Smith, A. P.	48557, 49917, 50038, 50789
Simon, K.	49350	Smith, C.	51195
Simon, R. W.	51859	Smith, E. W.	48559
Simplex Electric Co., Ltd.	47040, 48982	Smith, G.	46831
Simpson Coal and Chemical Corporation.	49577	Smith, G. W.	51540, 51541
Sindhi, K. M.	48200	Smith, J. T.	46822
Singer Manufacturing Co., The.	47258, 47455, 47521, 48834, 48835, 52330, 53112	Smith, K. D. Mrs.	52353
Singh, A.	46604, 46605, 48874, 52818	Smith Kline & French International Co.	49300, 50436,
Singh, Asa	48440	Smith, M. D.	53235
Singh, B.	50396	Smiths Jacking Systems Ltd.	48087
Singh, Banwari	50418	Smith, S. M.	51392
Singh, D.	46722, 52800	Smith, Stanistreet & Co., Ltd.	48585, 52161
Singh, H.	48060, 50228, 51165, 51257, 52071, 53129	Smith, W. B.	50117
Singh, J.	47027	Smith, W. H.	49214
Singh, J. P.	50419	Smit, P.	50567
Singh, K.	52691	Smitsvonk, N. V.	46622, 46623, 46692, 49704, 50736, 50898, 51895, 51896, 51897, 52011, 52012
Singh, M.	53255	Smout, W. C. P.	48436
Singh Manmohan.	50296	Snell, C. E.	47334
Singh, Mohan	50377	Snia Viscosa Societa Nazionale industria Applicazioni Viscosa Societa Per Azioni.	46535, 46536, 46537, 51434
Singh, N.	46996	Soberma	47110, 49218
Singh, R. N.	52456	Soberma (Societe de Brevets, d'Etudes et de Recherches pour le Magnesium)	51695
Singh, S.	46729, 46730, 46796, 48694, 48966, 49303, 49968	Soc. Coll. Adriano Gardella & F. Llo.	46941, 49242
Singh, T.	52824	Societa Forni Lubatti	49987, 50598, 50815, 50911
Singh, V. P.	46621	Societa Generalae Proggia ari.	
Singh, P. P.	48353	Allgemeine Beregnungs gesellschaf m.b.H.	51908
Simha, S. N.	47078, 50887	Societa Italiana AUTOLOT S.R.L.	49639
Sircar, J. P.	47529, 49227, 50239, 52264, 52265	Societa Italiana "Cardpen".	52486
Sir James Farmer Norton & Co., Ltd.	51721	Societe Anonyme Belge De Mecanique Et D'Armement.	50009
S.I.S. Societe d'Investissements Collectifs	46636, 49517, 50994, 51400, 51437, 51581, 52040, 52541	Societe Anonyme Des Etablissements Neu.	49796

Numes. Register
Numbers.

S—contd.

Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint Gobain, Chauny and Cirey.	47133, 47323, 47481, 47678, 47721, 47735, 47752, 48915, 50539, 50852, 51200, 51216, 51835, 52108, 52135, 52948.
Societe Anonyme Des Pneumatiques Dunlop.	52059
Societe Anonyme dite: Societe Generale Isothermos	47137, 47138
Societe Anonyme Potasse et En- grais Chimiques.	46666
Societe Anonyme Pour Les Appli- cations De L'Electricite Et Des Gaz Rares-Etablissements Claude- Paz & Silva.	47293, 47361, 47844, 48674, 50439, 51083, 51995, 52995.
Societe Civile D'Etudes Pour Mate- riel De Fonderie	52174
Societe d'Applications Generales d'Electricite & de Mecanique. .	50682, 50746, 50883, 50944, 50982, 52775, 53228, 53229.
Societe De Fabrication D. Appareils De Cinematographie (en abrege Societe Facine)	51930
Societe De La Pile Leclanche . . .	46916
Societe D'Electro-Chimie, D'Elec- tro-metallurgie Et Des Acieries Electriques D'Ugine	46973, 47955, 49559, 50233, 50304, 52370.
Societe De Prospection Electrique. Procedes Schlumberger	47625, 52476
Societe Des Acieries De Longwy . .	50991
Societe Des Acieries De Pompey . .	51408
Societe des Etablissements. BARBET	50276
Societe Des Laboratories Labaz . .	51823
Societe Des Usines Chimiques Rhone —Poulence	46531, 46532 46579, 46580, 46870, 47060, 47198, 47509, 47510, 47552, 47553, 47557, 47880, 48201, 48202, 48605, 48789, 48797, 48844, 48886, 48895, 48896, 49002, 49003, 49195, 49219, 49567, 49719, 49789, 50112, 50113, 50246, 50796, 51381, 51382, 51499, 51500, 51551, 51564, 51623, 51651, 51844, 52357, 52778.
Societe D'Etudes, De Recherches Et D' Applications Mecaniques. .	50645
Societe D'Etudes Et De Participa- tions Eau-Gaz-Electricite-Energie S A.	50993, 52006

Names. Register
Numbers.

S—contd.

Societe D'Exploitation Des Brevets Moineau	52562, 52563
Societe dite; Saint Freres, Societe Anonyme	50801, 50802
Societe Du Vacuum Concrete . . .	47117, 52020, 53019
Societe en commandite simple dite: S.E.B.I.M. Societe D'Exploita- tion Des Brevets Et Inventions Marrie	47092
Societe Financiere D'Expansion Commerciale Et Industrielle S. A. "Sindex".	47184
Societe Financiere Pour L'Industrie Metallurgique	47318
Societe Francaise Radio-Elec- trique.	49923, 52671
Societe La Cellophane, (La Cello- phane SA).	50126, 50127, 50128
Societe Nationale De Constructions Aeronautiques Du Sudouest. . .	51589
Societe Nouvelle Des Etablissements Brandt.	53342, 53343
Societe pour le Traitement et l. Amel- liration des Tissus	46663
Societe Solumeta	46542
Societe Thermo-Mecanique	49220
Socony Mobil Oil Co. Inc	52380
Socony-Vacuum Oil Company, Inc .	50578
Sodha, K. B.	53020
Solanki, J. S.	48376
Somani, S. G. N.	48785
Somstham, D. K.	49527
Sonoptic	50190
Sonti, V. R.	51879, 52142.
Soonderdas, J.	49373
Sorez, E. J.	48276
South Anchor Jute Works (Dundes) Limited	46800
Southern Dyestuff Corporation. .	48193, 48194, 48195
Spanel, A. N.	51444
Sparkler Mfg. Co.	52016, 52017
Spencer Moulton Flexitor Limi- ted	47129
Spinnbau G. m. b. H.	51056
S.P. Kinney Engineers, Inc. . . .	49374
Spooner Food Machinery Engi- neering Company Limited	47505, 48466
Sprenger, E.	53070
Squier Corporation, The	49726
Srinivasan, S. I.	48205, 48857
Sri Shankar Engineering Works .	50858

Names.	Register Numbers.	Names.	Register Numbers.
S—contd.		S—contd.	
S. R. L. Studi E Brevetti Applicazioni Tessili.	48941, 48942	Standfast Dyers & Printers Limited.	47327, 47350, 49108,
S. Simpson Limited	46917	St. Anne's Board Mill Co., Ltd.	50069
Stabilimenti di Ponte Lambro, S.P.A.	48796	Stanton Ironworks Co., Ltd., The.	49102, 53178
Stabilinternacional, S.A.	51802	Stark, V.	53378
S. Tajbhai & Sons	52704	Star Stampa Tessuti Artistici S.p.A.	51531
Stamicarbon, N. V.	48776, 48986, 49352, 49569, 49718, 49732, 49910, 50034, 50035, 50099, 50224, 50382, 50614, 50647, 50691, 50833, 50845, 50878, 51226, 51245, 51377, 51477, 51633, 51666, 52318, 52570, 52575, 52679.	Stead, R. G.	47002
Stammwitz, L.	50919	Stebler-Saner	50280
Standard Oil Co.	49636	Steel Company of Wales Ltd., The.	52872
Standard Oil Development Company.	47469, 47549, 47619, 47778, 47931, 48034, 48048, 48351, 48449, 48778, 48779, 49014, 49165, 49505, 49563, 49582, 49710, 49922, 50546, 51563.	Steel Master (India) Ltd.	48875
Standard Pharmaceutical Works Ltd.	52548, 52744	Steeper, C.P.	47305
Standard Telephones and Cables Ltd.	46588, 46700, 46810, 46818, 46842, 46940, 46959, 47343, 47344, 47345, 47346, 47375, 47484, 47485, 47486, 47564, 47697, 47738, 47805, 47887, 47888, 47952, 47953, 47954, 48051, 48219, 48220, 48325, 48492, 48536, 48537, 48598, 48664, 48725, 48763, 48764, 48765, 48782, 48964, 48992, 48993, 48994, 48996, 49032, 49259, 49260, 49261, 49262, 49325, 49345, 49445, 49466, 49467, 49594, 49601, 49602, 49606, 49607, 49640, 49721, 49753, 49779, 49780, 49800, 50051, 50105, 50106, 50107, 50164, 50234, 50285, 50545, 50943, 51022, 51023, 51024, 51098, 51099, 51100, 51101, 51116, 51192, 51248, 51249, 51309, 51310, 51311, 51404, 51416, 51421, 51470, 51471, 51546, 51562, 51708, 51756, 51821, 51822, 51938, 51939, 51957, 52098, 52099, 52100, 52154, 52158, 52263, 52289, 52305, 52306, 52307, 52308, 52309, 52367, 52368, 52369, 52561, 52667, 52720, 52737, 52842, 52906, 52957, 53002, 53003, 53110, 53121, 53257, 53261, 53262, 53263, 53407.	Sterling Drug Inc..	47398, 47399 49318, 50938, 51166, 51677, 51829.
		Sterling Engineering Co., Ltd.	49598
		Steuerman, S.	52082, 52371
		Stevensons (Dyers) Ltd.	48731, 51079
		Stichting Waterbouwkundig Laboratorium	52105
		Stienen, E. A.	49765
		Stimpson, E. G.	51095
		Stokland, S.	50723,
		Stoller, I.	51717
		Stothert & Pitt, Limited.	51874
		Stott, J. W.	52267
		Strachan and Henshaw Limited.	50997, 50998
		Strang, P. M.	52201
		Straussler, N.P.S.	46890 48740
		Strichting Reader Centrum Nederland	53161
		Stripa Gruvaktiebolag	50957
		Strong Cobb and Company, Inc.	47288
		Sttug Chemicals	49426
		Studi E Brevetti Applicazioni Tessili s.r.l.	48263, 49116
		Studien-Und Verwertungs-Gesellschaft m.b.H.	49244
		Subba Rao, S. R.	51313
		Subramanian, N.	52388
		Subramanyam, P. S.	47463
		Sudlow, E. W.	50667
		Sulzer Freres Societe Anonyme.	47948
		Sumie, Y.	52684
		Sundaram, S.	48620
		Sundaram, V.	47353, 47533, 49891
		Sun Oil Company	47240
		Superheater Co. Ltd., The	47153
		Suryanarayana, B.	47503
		Suszkina, A.	49176
		Sutavani, S. J.	48602

Names.	Register Numbers.	Names.	Register Numbers.
S—contd.		T—contd.	
Sutter Products Company	49966	Tarkar, A. B.	49809
Sutton, G. P.	52885	Tarkar, B. A.	48392, 49809
Suzuki, S.	50652	Tata Iron & Steel Co. Ltd., The, .	49101, 51114
Svenska Aktiebolaget Bromsregulator	48284	Tattersall, B. H.	51082
Svenska Aktiebolaget Gasaccumulatore	53411	Tawakley, B. S.	48093
Svenska Rotor Maskiner Aktiebolag.	50766, 52972, 52973	Tawakley, M. S.	49756, 52325
Svensson, L. E.	52383	Tawde, S. G.	51998
Svit, Narodni Podnik	46656	Taylor, W. P. Jr.	49246, 49247
Swami, N. P.	48315	Tecalemit Ltd.	46840, 47030
Swami, V.	49702, 50383, 50588	47052, 47488, 47561, 47577, 47901, 48117, 48197, 48251, 48423, 48724, 48759, 49907, 50103, 50907, 50916, 52491, 52840, 53017.	
Swan Mills Limited	52668	Technicolor Motion Picture Corporation	47034, 47773, 48968, 49301, 49389, 50708, 52857.
Swastik Rubber Products Limited	49997	Telegraph Construction & Maintenance Co. Ltd.	47099
Sweet, C. M.	47180	Telephone & Electrical Industries Pty. Ltd.	46957
49337, 49512, 53323.		Telephone Manufacturing Company Limited	46790, 46958, 47044, 49238, 49404, 52104, 52213, 52650, 52683, 52741.
Swendsen, J. W.	51144	Tenbroeck, W. D.	47704, 47705
Switchgear & Cowans Ltd.	46964 48998	Tendolkar, G. S. Dr.	48154
Sydney Smith and Sons (Nottingham) Ltd.	49087	Tesla, Narodni Podnik	50041
Sylvania Electric Products Inc.	52651, 53305, 53410, 53437.	Texaco Development Corporation	47167, 48238, 48462, 48675, 49853, 51767,
Syme, J.	52904	Textile & Chemical Research Company Ltd.	49600
Szego, L.	51863	Thakre, G. R.	47615, 48236, 48817, 51647, 52837, 52838, 53346.
Szwajcer-Price, A.	47969, 48165	Thampy, R. T.	49015
T		Thangaraj, K. B.	51627
Taccone, R. W.	52643	Thapar, M. R.	51569
Tagliero, A. J.	49177	Theodor Rapp K. G.	51038
Tainton Company, The	47111	Thermofringor. (Societe Anonyme)	48842
Takagi, T.	50947, 50948	Thoma, H.	46702, 46703, 46704, 46705.
Takakita, A.	48498, 53188	Thomas, A. J. P. J.	47728
Takakita, M.	48498, 53188	Thomas Ash & Co., Ltd.	51759
Takakita, S.	48498, 51732, 53188	Thomas Ashworth and Co., Ltd.	50514
Takakita, T.	48498, 53188	Thomas C. Keay Ltd.	50163
Takeda Pharmaceutical Industries Limited	47818, 48621 49730, 51760	Thomas, J. E. S.	52941
Takita, S.	49322	Thomas Robinson & Son Ltd.	48563, 48564
Talalay, A.	51722	Thoria, L. Dr.	51937
Talalay, J. A.	51722	Thorn Electrical Industries Ltd.	46865, 47992, 48310.
Talati, J. G.	49654, 53440	Thottam, J. P.	48838, 49399
Tamboli, J. K.	49705	Thrissell Engineering Co. The.	47351
Tambhakar, R. V.	49659	Thwaites, L. B.	47759
Tandon, Y. D.	49952		
Tangyes Limited	52826		
Tank, Maganlal Purushottamdas	52770		
Tank, Mohanlal Purushottamdas	52770		
Tannoy Limited	50670		
Tara Oil Mills Company Ltd., The,	49044		
Tarcici, A.	47231		

Names.	Register Numbers.	Names.	Register Numbers.
T—contd.		T—contd.	
Thyssensche Gas-und Wasserwerke G. m. b. H.	48893	Trelleborgs Gummifabriks Aktiebo- lag	47729
Tilak, B. D. Dr.	47503	Tribhovandas, B. V.	49519
Tilak, M. A.	50011	Trichy-Metal Works, The	49573
Timboga Corporation M/s.	47120, 47121, 47122, 47123, 48258, 48259, 48657, 48658, 48659.	Trifax, N. V.	49604
Timbrol Limited	53202	Trivedi, K. P.	48300
Timson, E. A.	49964	Trubenised Company (Regd. Trust)	51037
Timsons Limited	49964	Trubenised (Gt Britain) Limited .	48122, 48726.
Tinio, D. J.	49578	Thru Colour Film Limited	47981
Tintoria Comense S. P. A.	51660	Tubewrights Limited	52160
Tipdex (Holdings) Ltd.	53304	Tungstone Products Ltd.	51498
Tipping, W. F.	46819	Turnbull, R. H.	47860
Titan Company A/S.	51206	Turner Brothers Asbestos Co. Ltd. .	53231
Titan Company Inc.	46942, 46963, 47014, 48146, 48169, 48211, 48212, 48233, 48424, 48569, 48876, 50797.	Tweedales and Smalley (1930) Ltd.	50055
Titan Eisenwaren fabrik Gesellschaft Mit Beschränkter Haftung	50635	Tyre Equipment & Reconditioning Company Limited	52604
Titan Pty. Limited.	46867	U	
T. J. Smith & Nephew Ltd.	46617, 47662, 47674, 49460, 50066, 51609	Uchiyama, Y.	49788, 49808
T. Maneklal Mfg. Co. Ltd.	46986, 46987, 46988, 46989, 46990, 46991, 46992, 46993.	Udupa, H. V.	49405
T, M. M. (Research) Limited	46527, 46566, 46757, 46786, 47008, 47854, 47870, 47996, 48119, 48255, 49052, 49053, 49592, 50179, 50563, 51322, 51330, 51772.	Udy, M. J.	52790
Toenniessen, E.	52921, 52922	Uher, E.	47957, 47958, 48773
Tokyo Juki Kogyo Kabushiki Kaisha	52041	Ullah, W. Sk.	52694
Tokyo Shibaura Electric Co. Ltd. .	51985, 51986.	Umar, M.	47672, 47673
Toledo Scale Company	46763	Umrigar, H. K.	47038
Tomasson, H.	52860	Umrigar, S. M.	47246
Tomson, E.	51859	Unga Limited	47193
Tonelli, C.	48042, 48043	Unilever Limited	47456, 48267, 48339, 48681, 48828, 49041, 49624, 49834, 49959, 50090, 50091, 51141, 52360, 52522, 52693, 52819, 52960, 53248, 53405.
Tootal Broadhurst Lee Co. Ltd. . .	47508, 47536, 48250, 50827, 52746.	Union Carbide and Carbon Corpora- tion.	46561, 46850, 47125, 48368, 50071, 51234, 51510, 51638, 52119, 52424, 52546, 52772, 52913, 53043, 53068, 53149.
Topley, C. W.	48009	Union Sils. Van De Loo & Co. . . .	49983
Topp & Hindley (Webbing) Ltd. . .	50455	Uniprint Gesellschaft Fuer Neue Druckverfahren m.b.H.	47025
Torcheux, E.	51456	United States Rubber Company . . .	50548
Torisu, R.	53075	United States Steel Corporation. . .	47496, 48237, 48345, 48380, 48467, 48636, 49696, 50729, 50859, 51355, 51640, 51788, 52010, 52151, 52547.
Torrance & Sons Limited	52125	United Steel Companies Ltd., The . .	48847
Towndrow, E. N.	47781, 50755	Uniton Limited	52719
Towns, E. J.	51569	Universal Oil Products Company. . .	47727, 48103, 49658, 49678, 49995, 52170, 52404, 52433, 52478, 53385.
Toyo Katsui Industries, Incorporated	52552		
Transart Aktiebolag	47638		
Trans-Europe G. m. b. H.	50866		
Trehan, P. L. Dr.	52102		

Names.	Register Numbers.	Names.	Register Numbers.
U—contd.		V—contd.	
Universal Winding Company.	47049, 47171, 52999.	Vishwakarma, B. P.	51587
University of Leeds, The	52699	Vishwakarma, L.	53365
Uozumi, I.	48182, 50532	Vishwakarma, M. P.	48039
Upjohn Company, The	46871, 52971	Vishwakarma, S. K.	51415
Uppal, B. S.	49944	Visking Corporation, The	48406, 48705, 52644.
Urquhart Lindsay & Robertson Orchar Limited	48814, 48883	Viswanathan, H.	52726
Usines Chimiques Des Laboratoires Francais	50495	Vitaana Corporation, The	47062, 47063, 47420, 51438, 51723, 51724, 52092, 52093.
Usines Emile Henricot Societe Anonyme	49789	Vithal, K. R.	51703
Utah Scientific Research Foundation	51106	Voge, C. I. B.	49940
V		Vokes Limited	49289
Vacu-Blast Limited	49562	Volkar Brothers	52228
Vacuumatic Limited	52970	Volland, G.	48333
Vakil, D. M.	52166	Von Barnekow, E.	48780
Valite Corporation	47524	Vondrous, J.	47934
Vallak, E.	49478	Vono Limited	51839
Vandervell Products Ltd.	51650, 53444	Vouvard, M.	48753
Vapiwalla, J. F.	52523	Vowles, F. G. R.	50302
Vapor Heating Corpn.	50956	Vuagnat, G.	53009
Variapat, A. G.	46516, 46517, 46518	W	
Varma, A. R.	52620, 53111	Waagner-Biro Aktiengesellschaft	51728, 52815
Vatsa, P. N.	47878	Waddington, R. S.	51852
Vaugh, M.	51840, 51841, 51842	Wadia, D. J.	47237, 50288, 52615
Vazifdar, J. P.	50363, 50364, 50365	Wadke, M. S.	51573, 52060
Vella, L.	51121	Wagner, E. V.	48546
Velsicol Corporation	46915	Wagon Repairs Limited.	48748
Venetian Vogue Limited	48161	Waldenmaier, H. W.	50871, 52791, 53297.
Venkataramanan, K. I. Dr.	52376	Wall, E.	48225, 48226, 48227
Venygr, K.	50290	Waller, P. H.	47370
Vereinigte Aluminium-Werke Aktiengesellschaft	50131, 50420	Waller, W. M. (Mrs.)	47370, 52729
Vereinigte Kugellagerfabriken Aktiengesellschaft Schweinfurt	46541, 46848, 47100, 48240.	Wallimann, H. A. (Mrs.) (nee Hunziker)	51795
Vereinigte Oesterreichische Eisen-Und Stahlwerke Aktiengesellschaft	48484, 48485, 48486, 48487, 49575, 51728.	Walls, R. N.	50163
Verma, F. O.	48092	Walsh, C. L.	49254
Verwaltungsgesellschaft der Werkzeugmaschinenfabrik Oerlikon	49791	Walterisation Co. Ltd., The	49727
Vibrane Corporation, The	49076	Walter Jones & Co. (Engineers) Ltd.	48792, 48859.
Vickers-Armstrongs Ltd.	46572, 47708, 51184, 52276, 52277.	Walter Urban & Co.	49269
Viegas G. J. S.	49975	Walther & Cie. Aktiengesellschaft	47405, 49816, 49822.
Vijnana Parishat	47941, 51428	Walton, H. D.	51515
Visenjou, L. B.	47770	Walton Washing Machine Corporation	50209
Vishnu	52758	Walunjkar, V. G.	49075
		W. & T. Avery Ltd.	49609, 51191, 52300.
		Warburton, R. E. L.	50791, 50792, 51045.

Names.	Register Numbers.	Names.	Register Numbers.
<i>W—contd.</i>		<i>W—contd.</i>	
Ward Blenkinsop & Co. Ltd.	47538, 47984, 49125.	Westphal, C. E. Dr-Ing.	51465
Warden, J.	49065, 49126	West Point Manufacturing Co.	50005, 51067, 52437.
Wargons Aktiebolag	46948	Westwood, V. H.	47665
Warin, G.	49090	Wettlaufer, J. L.	47260, 47339
Warner-Hudnut, Inc.	48984, 51683	Wharton and Wilcocks Ltd.	51247
Warner, W. P.	53189	Wheeler, J. E.	50302
Warren-Smith, R. L.	46493	Wheelerweigh Ltd.	47634
Warrier, K. R.	47838	Wheeling Steel Corporation	47232
Wartenberger, F.	50605, 50606	W. H. Harton & Co. Ltd.	47847, 47848
Wasdell, W. K.	48338, 48496	Whiffen & Sons Ltd.	52297
Watson, B. M.	52316	White, E. E.	48298
Watts, E. H.	47964, 53144	White, J. P.	51066
Waugh Equipment Co.	47877	W. H. Miner, Inc.	51455, 51814, 52075.
Wayhe Tank and Pump Co. Ltd.	50507	Wickman, A. C.	53434
W. C. 't Hart & Zn.	47058	Wiedmann, R.	49794
Weaving Research and Textile Commission Agents Ltd.	52472, 53355	Wiggins, L. F.	47442
Webb, H. W. B.	51749, 51750	Wilbushewich, E.	47459
Wegmann & Co.	49340	Wilhelm Geidner Metallwaren fab- rik	53113
Wegner Brothers Ltd.	49460	Wilhelmi, H. Dr.	50583
Wehrli, F.	52245	Wilhelm Sihm, K. G. Jr.	50152
Weinstein, P. S.	46667	Wilkins & Mitchell Ltd.	49950
Weir Valves, Ltd.	49819	Willetts, E.	52473
Weitzl, A.	50156, 52910	Willetts, E. G.	52473
Welex Jet Services, Inc.	52936, 52956	William Ayrton & Co. Ltd.	53258
Wellcome Foundation Ltd. The	46495, 46499, 46651, 46791, 47783, 47974, 48827, 49005, 49196, 49248, 49480, 50537, 50693, 50894, 50927, 50928, 50941, 51041, 51042, 51503, 51504, 51505, 51615, 51819, 51857, 52366, 52521, 52550, 52942, 52943.	William Jessop & Sons. Ltd.	52869
Wells, R. A.	48810	William Kenyon & Platts (Narrow Fabrics) Ltd.	53078
Wanner-Gren A. L. Dr.. . . .	48599	Williams, E. O. Sir	48403, 51016
Werkspoor, N. V.	49953	Williams, F. R.	49965
Wernert, K.	47342, 48583	Williams, O. M.	48843
Western Electric Co. Incorporated	47150, 48677, 48880, 49596, 49879, 49942, 50121, 50257, 50880, 50964, 52319, 52735.	Williams, O. T.	51016
Western States Machine Co., The	48718	Willams, R. T. O.	50817
Westinghouse Air Brake Company	49415, 49416, 52407, 52507, 52535, 52536, 53417.	Wilson, G. W.	46668
Westinghouse Brake & Signal Co. Ltd.	46509, 46674, 46847, 47057, 48908, 48949, 49509, 50774, 51111, 51301, 51302, 51473, 51497, 52336, 52337, 52669, 53117, 53204.	Wilts United Dairies Ltd. The	49166
Westinghouse Electric Corporation	50895	Wimmer, A. Dr.	52751
Westinghouse Garrard Ticket Ma- chines Ltd.	47714, 47732	Wimmer, T. Ing. J r.	52920
Westley, R.	49913	Winger, L. T.	46743
		Winget Limited	53016
		Wingfoot Corporation	46565, 46814, 47098, 47124, 47243, 47336, 47387, 47497, 47498, 47534, 47535, 47571, 47641, 48035, 48102, 48185, 48562, 48690, 48706, 48862, 48868, 49521, 49522, 49531, 49547, 50072, 50073, 50144, 50158, 50196, 50461, 50462, 50727, 50915, 50946, 51046, 51133, 51161, 51265, 51266, 51409, 51430, 51431, 51432, 51837, 51838, 52149, 52252, 52253, 52633, 52634.

Names.

Register
Numbers.

W—contd.

Winkelman, F. S.	53256
Wisconsin Alumini Research Foundation	47523
Wiser, J. N.	52810
Wlodek, T. W.	52888
Wm. R. Stewart & Sons (Hacklema- kers) Ltd.	52989
Wolf, F. J.	49878
Wolf-Gerate G. m. b. H.	48229
Wolfinger, J.	51351
Woodall-Duckham Vertical Retort and Oven Construction Co. (1920) Limited, The	49641
Woolcott, L.	52421
Worldwide Research Corporation	46896
Wotton, C. S. R.	52856
Wright, E. H.	49324
Wright Electric Motors (Halifax) Limited	50867
Wright, G. C.	52719
W. R. Sykes Interlocking Singal Co., Limited	46509
W. Strikfeldt & Co.	51861, 52505
W. T. Glover & Ltd.	51274
Wuerttembergische Spindellfabrik G. m. b. H.	46909, 47021, 48927, 48928, 49372, 50741, 50913.
Wurster & Sanger, Inc.	50438
W. W. Sprangue & Co., Ltd.	52282
Wyeth Incorporated.	46676, 48314
Wynmalen, H.	48991, 49937, 51158
X	
Xetal Products Ltd.	46983, 49825

Names.

Register
Numbers.

Y

Yadav, R.	46459, 50761, 52993.
Yamaguchi, T.	47196
Yanmar Diesel Engine Co. Ltd.	47112, 47113
Yardhey International Corp.	50825, 51320
Yashanoff, B. A.	47998
Yates, B. P.	49583
Yeatman, H. M.	51340
Yorkshire Copper Works Ltd., The	48081, 52732, 53303.
Yorkshire Switchgear & Engi- neering Company Ltd.	48264
Yoshida, T.	52506
Yoshioka, T.	52116, 52742
Young, A. D.	49913
Young, P.D.S.	52544
Young, R.W.	52331

Z

Zaheer, S. H.	47999, 48934, 49178, 51701, 51816, 52338.
Zaidan Hojin Sekitan Sogo Ken- kyujo	48811, 49040, 49173, 49943
Zalcman, H.	47031, 48987, 48988.
Zan, T.	50644, 51159
Ziegler, K. Dr.	53153
Zilliken, F.	48903
Zonite Products Corporation	52034
Zuelchaur, G.	47068, 47093, 50582 52269.
Zunckel, B.	47741
Zveibil, S. M. Dr.	4805, 49281

PART VIII.

Name Index (Designs), 1954-1955.

Name Index of Applicants in respect of Designs registered during the years 1954-1955.

Name.	Class No. and Year.	Name.	Class No. and Year.
A.		A.—contd.	
(M/s.) Abdul Kadar Husseinally Vasi & Co.	13/54	Andrews, V. A.	3/54
Abraham, (Mrs.) A	1/55	Anglo Indian Drug & Chemical Coy	4/54
Abraham, K. C.	1/54	Anil Paper Caps Factory	5/54
(M/s.) Achhelal Sheel Chand Jain	5/54	(M/s.) Arabian Dyeing & Printing Works	13/54
Adresh Soap Mills	3/55	Armstrong Patents Co. Limited	1/54
Aero Modellers (India)	3/55, 5/55	Arnold & Sons Veterinary Instrument Limited	1/54
Agarwal Chemical Works	5/54	Arora, G. C.	5/55
Agricultural Implements & Brass Utensils	1/55	Arsiwalla, A. M. K.	1/55, 3/55
Ahmad, M. S. S.	1/55	Artbangle Ltd.	3/54
Ahmad, N.	1/54	Arumugam Type Foundry	1/54
Ahmad, S.	1/54	Aruna Mills Limited, The	13/54, 13/55
Ahmed, H. A.	3/53	Arvind Mills Ltd., The	13/54, 13/55
Ahmed, S.	5/55		14/55
Ahmedabad Advance Mills Ltd.	13/55	Aryan Brush Company Limited.	3/55
(M/s.) Ahmedabad Kaiser-I-Hind Mills Co., Ltd., The	13/54	(M/s.) Asarwa Mills Limited.	13/54, 13/55
Ahmedabad Manufacturing and Calico Printing Co., Ltd., (The Calico Mills)	13/54, 13/55	Ashok Silk Mills	13/54, 13/55
Ahmedabad New Textile Mills Co., Ltd.	13/55		14/54, 14/55
Ahmodabad Sarangpur Mills Company Limited, The	13/54	Ashoke Glass Works	3/55, 4/54,
Ajeet & Co.	5/54		4/55
Ajit Industries	1/55	Asian Industries	1/53
(M/s.) Ajit Mills Limited, The	13/54, 13/55	Asoka Mills Limited, The	13/54, 13/55
	14/55	Associated Imports & Exports Co., Ltd.	5/54
Alam, A.	4/54	Azeez, M. A.	1/54
Alam, K.	4/54	Azimullah, H.	1/55
Alembie Chemical Works Co., Ltd.	4/53	Ayurved Sevashram Ltd.	4/55
Ali, G. M. S.	1/54, 4/54,		
Allied Metal Corporation	1/54	B.	
Allisan Alagusundaravel Karaiyalar	5/54	B. Aman Bidi Works	5/55
Amalgamated Engineers	1/53	B. K. Plastic Industries	3/55
American Lock Works	1/54	B. P. Benzin-Und Petroleum-Gesellschaft Mit Beschränkter Haftung	4/54
Ames Irrigation Pty. Ltd.	1/55	B. V. Aswathaiah & Bros.	5/54, 5/55
Amin, M.	1/55	(M/s.) Babu Bidi Company	5/54
Amrit Banaspati Co., Ltd.	13/54, 13/55	Bajaj Brothers	1/55
Amritham, A. N. S. N.	5/54	Balakrishna Industrial Works	5/54
Amritsar Rayon and Silk Mills Ltd., The	13/55	Baldiwalla, M. V.	1/55
		Banaras Beedi Works	5/54
		Banerjee, G. N.	1/55

Name.	Class No. and Year.	Name.	Class No. and Year.
B - contd.		C.—contd.	
Banerjee, S. C.	1/54, 4/54	Calico Processors Limited . . .	13/55, 14/55
Bansal, D.	3/55	Camlin Limited	4/54
Barth, C.	1/54	Central India Spg. and Mfg. Co., Ltd., The	13/53, 13/54 14/54
Bata Shoe Company Limited . . .	10/54	Century Spg. & Mfg. Co., Ltd., The	13/53, 13/54 13/55, 14/53, 14/54, 14/55,
(M/s.) Bechardas Spg. & Wvg. Mills Co., Ltd., The	13/53, 13/54 13/55	Chabbra, P. D.	3/53
Bengal Distilleries Co., Ltd.' The	4/54	Chand, N.	1/53
Benjamin Electric Limited . . .	1/54	Chandra Sen Jain & Company . . .	5/54
Bhagat Singh & Sons	5/54	Chettiar, D. C. B.	5/55
Bhagya Luxmi Glass Agency . . .	4/55	Chettiar, K. R.	5/55
Bhalakia Mills Co., Ltd., The . . .	13/54	Chettiar, M. N.	5/55
Bhandarid, G. R.	14/55	Chettiar, M. P.	5/55
Bharat Calico Printing Mills . . .	13/54, 13/55	Chettiar, S. V. M.	5/55
Bharat Carbon & Ribbon Mfg., Co., Ltd., The	3/54	Chetty, Dr. B. R. N.	5/54
(M/s.) Bharat Suryodaya Mills Com- pany Limited, The,	13/54, 13/55 14/54	Chhachhi, (Sardar) J. S.	1/54
Bhargave, P.	4/55	Chhotalal Mills Limited, The . . .	13/54
Bhatia Dyeing & Printing Mills . .	13/55	Chitty, E. C.	12/54
Bhattacharjee, B. M.	5/54	Choksey, I. S.	4/54
Bidi Fa. tory	5/55	Chopra, Y.	1/54
Bihari Mills Limited, The	13/55	Chowdhury, B.	1/53
Bijlani, K. N.	1/54	Chowdhury, Binandilal	1/53
Birla Cotton Spg. & Wvg. Mills, Ltd., The	13/54	Chowdury, D.	1/53
Blue Bird & Co.	5/55	Chowdhury, K.	1/53
Bombay Calico Printing Mills, The	13/55	Clipper Pen Co., The	1/54
Bombay Iron & Steel Works	1/54	Colgate Palmolive (India) Ltd. . .	3/55
Bombay Union Dyeing Mills, The	13/53, 13/54, 13/55, 14/53, 14/54, 14/55	Colimator Cases Limited	3/55
Bonson, W.	1/54	Commercial Ahmedabad Mills Company Limited, The.	13/54, 13/55
Boroda Type Foundry	1/54	Commonwealth Trust Limited, The	4/53, 4/55
Botra, J. K.	13/55	Compagnie Parisienne D'. Ontillage & Air Comprine	1/55
Bradbury Mills Ltd., The	14/54	Corn Products Refining Co.	4/55
Bright Brothers Limited	1/54, 3/54, 3/55	Cromelive (India) Limited	1/55
Britannia Biscuit Company Limi- ted, The,	12/55	Crown Spg. & Mfg. Co., Ltd., The, .	13/53, 13/54, 13/55, 14/53, 14/54, 14/55
(M/s.) Burma Prints	13/54	Currie, O. J.	12/53
Burmah Plastic Moulders	3/55	D.	
C.		D. C. Nagappa Chetty and Brother	5/53
Cadell Weaving Mills Co., Ltd. . .	13/54, 13/55 14/55	Dajibhai, P.	13/54
Calcutta Chemical Co., Ltd., The, .	4/54, 1/55, 5/55	Darwish, S.	1/55
Calico Dyeing and Printing Works	13/53, 13/54, 13/55, 14/54	Dass, L.	1/54
Calico Printers' Association Limited, The	13/53, 13/54	Dastgir, M.	1/54, 3/54, 5/54
		Datta Industries	1/54
		Davidoss & Co.	14/53
		Dawn Mills Co., Ltd., The	13/53
		Deepak Oil Mills	5/55
		Delhi Cloth and General Mills Co., Ltd., The	13/53, 13/54, 13/55, 14/54, 14/55
		Delhi Commercial Corporation . . .	5/54

Name.	Class No. and Year.	Name.	Class No. and Year.
D.—contd.		G.—contd.	
Delhiwala, H. A. R. C.	1/53, 1/54	Gestetner Duplicator Ltd.	1/54
Dembla, K. G.	12/55	Ghiasuddin	1/54
Deshmukh, L. K.	1/54	Ghose, N. L.	1/54
Deshpran Engineering Works	1/55	Gidwani, G. M.	1/53
Dev Plastic Works	3/55	Gilbert, W. H.	1/54
Dey, J. N.	4/55	Gilder, S. K.	1/53
Dhanjal, K. S.	1/54	Globe Rubber Co., The	3/55
Dhanji, S. D.	13/53, 13/54, 13/55	Godrej Soaps Limited	4/54
Dhanraj	3/53	Goetze (India) Ltd.	5/55
Dharmarajan, K. P.	5/54	Golden Mahal Moulding Factory	3/55
Dilbahar Zarda Factory	5/54	Goodyear Tire and Rubber Co., The.	3/55
Dileep Dyeing & Printing Works	13/54, 13/54	Gopal, Dr. N	5/55
Don Watson & Co., Ltd.	1/54	(M/s.) Gopal Mills Company	13/54
(M/s.) Dot Pens Limited.	3/53	Limited, The	13/54
Dubash, D. S.	3/55	Gounder, K. M.	5/54
Dunlop Rubber Co., Ltd.	3/53, 3/54, 3/55	Gounder, M.	1/54
Dwarkadas, D. K.	13/53	Goya Limited	4/53
Dwarkesh Metal Works	1/54, 1/55	Goyal, (Sm.) S. D.	3/54
E.		Graetz, F.	1/54
E. Shipton & Company Limited	3/54	Graetz Kommandit-Gesellschaft	1/55
Eagle Chemical Industries (India)	5/54	Grant James Ltd.	3/55
Eagle Playing Card Mfg. Co.	5/54	Gripex (India) Ltd.	4/55
Ellora Art Industries	3/54	Gujrati, G. L.	1/55
Elphinstone Dye Works Ltd. The	13/55	Gupta, S. S.	1/55
Enarpee Products (India) Inc.	4/54, 5/54	Gurucharan Singh & Bros.	5/54
English Metal Mills, The.	1/55	Gurumikhsingh & Sons.	5/54
Erasmic Company Limited	4/54	Gwalior Rayon Silk Mfg. & Wvg.	13/54
Ercole Marelli & Co.	3/53	Co., Ltd., The	13/54
Essage Thread Mills	5/54	H.	
Eureka Type Foundry Ltd.	1/54	H. A. Shah and Co.	13/53, 13/54, 13/55
Ekcel Industries	3/54	Hamdard Dawakhana	4/53
Express Bidi Factory	5/55	Hamid, A. A. M. A. S.	5/55
F.		Harbans Lal Malhotra & Sons Ltd.	3/54
Firestone Tire and Rubber Company	3/53	Harbanslal, R.	13/54, 13/55
G.		Hargovandas, V.	5/55
Gai Limited	3/55	(M/s.) Harguson's Products	13/53, 13/54, 13/55
Gambhir, Dr. L	5/54	Horichand Textile Mills Ltd.	13/53, 13/54, 13/55
Ganapathi Chettiar, N. T. T.	5/54	Hasansab, F.	1/55
Ganesan, K. P.	5/54	(M/s.) Hemchand Amerchand.	13/54
Garware Finance Corporation Ltd.	3/54, 3/55	(M/s.) Hind Plastic Works Ltd.	3/54
Gem Chemical Company Ltd.	4/55	Hindusthan Plastic Ltd.	1/55
General Electric Company Ltd., The	1/55, 3/55	Hiralal	5/55
Geoffrey Manners & Company Ltd.	3/55	Hogan, J.	4/55
George Tucker Eyelet Company	1/55	Honlook Industry	1/55
Limited	1/55	Hoover Limited	1/55
		Hotchand, P.	13/55
		Hussian, A. S.	12/55

Name.	Class No. and Year.	Name.	Class No. and Year.
I.		K.—contd.	
India Crown Cork Company Ltd. .	1/54	Kansara, B. F.	1/55
Indian Tyre and Rubber Company Limited	3/54, 3/55	Kansara, B. T.	1/53
India United Mills Ltd., The	13/54, 13/55, 14/54, 14/55	Kansara, H. M.	1/55
Indian Cottage Works, The . . .	1/55	Kansara, Z. D.	1/55
Indian Iron & Steel Company Limited, The,	1/54	Kantore, K. L.	5/54
Indian Manufacturing Co. Ltd, .	13/54	Kapoor, Printing Works . . .	13/55
Indra Perfumery Co.	5/55	Kapur, H. S.	1/55
Industrial Plastics (India) . . .	3/55	Kapur, (Sardar) K. S. . . .	/55
Inone, T.	1/55	Kapur, N. S.	1/55
Irani, F. K.	4/54, 4/55	Kapur, R.	5/54, 13/54, 13/55.
Iron Product	1/55	Karanjia, T. K.	3/54
Issac Jackson & Sons (Beltfastners) Limited	1/54	Kareem, V. A.	5/54
Iyer, A. V. R.	1/55	Kashi Zarda Company	5/55
J.		Katari Colouring Factory . . .	4/55
J. C. Gammon (England) Limited .	4/55	Kattayakar Soap Factory . . .	5/55
J. C. Hui & Company	1/54, 1/55	(M/s.) Kay Dee Corporation , .	11/53
Jagatjit Distilling & Allied Indus- tries Ltd., The	4/55	(M/s.) Kersons Manufacturing Com- pany of India Limited	3/54
Jahangir Vakil Mills Co., Ltd., The	13/54	Keshoram Cotton Mills Ltd. .	13/53, 13/54, 13/55, 14/53 14/54, 14/55
Jaiswal, G. S.	5/55	Khan, M. A.	1/54
Jain, B. K.	1/54	Khan, M. Y.	4/54
Jain, K. L. N. C.	5/54	Khan, S.	5/54
Jamuna Mills Ltd. The,	13/54	Khandelwal, R. S.	5/54
Jasmine Mills Ltd.	13/55	Khanna, H. S.	3/54, 3/55, 5/54.
Jawahar Metal Works	1/54, 1/55	Khanna Dyeing and Printing Works	13/55
Javali, R. R.	1/55	Khanorkar, V. M.	1/53
Jayant Paper Box Factory . . .	5/54	Khare, A.	3/54, 3/55
Jeewanlal (1929) Limited	3/55	Khasim Beedi Factory	5/53
Jiyajeerao Cotton Mills Ltd. .	13/53, 13/54, 13/55, 14/54, 14/55.	Khatau Makanji Spg. & Wvg. Co., Ltd., The	13/53, 13/54, 13/55, 14/54, 14/55.
Joginder Singh Gurcharan Singh .	1/54	Khetani Textile Industries Ltd. .	13/54, 13/55
Jubilee Mills Ltd., The	14/55	Khedanlal, N.	5/55
Juggilal Kamlapat Cotton Spg. & Wvg. Mills Co. Ltd.	13/54, 13/55, 14/54.	Kid Metal Holloware Mfg. Works	1/55
Juneja, T. S.	12/54	Kishonchand	5/55
K.		Koh-I-Noor Nylon Limited, The .	3/54
K. G. Industries and Motor Parts Co.	1/54	Kosmek Limited	3/54
(M/s.) K. R. Vithal	5/55	Krishna Calico Printing Company	13/55
Kabali, J.	5/55	Krudd Industries Ltd.	1/54
Kanpur Bottling Company Limited	4/55	Kuppusawmi, N.	5/55
		Kuvarji, D.	13/55
		L.	
		L. K. B. Venkataramier & Co. .	5/55
		Lakhani Company	1/54, 3/54
		Lakshmi Paint Works	5/54
		Lakshmiratan Cotton Mills Co., Ltd.	13/54, 13/55

Name.	Class No. and Year.	Name.	Class No. and Year.
L—contd.		M—contd.	
Lal, D. L. M.	5/55	Milji, H.	1/55
Lal, J.	5/55	Mistry, M. L.	3/54
Lal, N. K.	5/53	Mital Rolling Mills	1/54
Lal, R.	5/54	Mitchell, W. R. M.	3/54
Lalchand	4/54	(M/s.) Mitharam Jasharam	5/53, 5/55
Lall, G.	5/55	Modern Water-Proof Papers Mfg. Co.	5/53, 5/55
Leonard Biermans Societe Anonyme	5/55	Modi Spg. & Wvg. Mills Co., Ltd.,	13/53, 13/54, 13/55, 14/55
Lightning Fasteners Limited.	5/54	The	
Lodge Brothers	3/55	Modi Sugar Mills Ltd.	5/55
Lookmanji, A.	5/54	Mody, Mrs. V.	1/54
Lookmanji, H.	5/54	Mohammed, Z.	1/54
Lookmanji, N.	5/54	(M/s.) Mohon and Suresh Company	4/53
Lookmanji, S.	5/54	Mohan Ghee Laboratories	5/55
Lord's Bakery Confectionery and	12/54	Mohanlal, R. C.	5/54
Biscuits Company		Mohanraj, V. K.	5/54
Lucky Paper Mart	5/54	Mohd. Ibrahim & Co.	1/55
M		Mohindra Engineering Works	1/54, 1/55, 6/54.
M. Elias and Bros.	1/55	Monga, B. D.	5/55
M. J. Thanawala & Co.	13/55	Morina Industries	1/55
M. P. M. Mohamed Nagoor	5/55	Morphy—Richards Limited	1/54
Rowther and Sons		Morris Metal Industries	1/54
M. Y. Asim & Co.	1/54	Motia Khan Co-operative Industrial	12/54
Mahie Todd & Co., Limited	3/54	Society Limited, The,	
Madewel Laboratories	5/55	(M/s.) Mrudul Metals	1/54
Madras Type Foundry, The	1/54, 1/55	Mudabir, S. M. K.	5/55
Madura Company Limited	4/54	Mudaliar, G. P.	5/55
Mafatnal Fine Spg. and Mfg. Co.,	13/53, 13/54	Mudaliar, S.	5/55
Ltd.		Mudaliar, T.	5/55
Mahabir Plastic Industries	3/54.	Mukherjee, U. R.	1/54, 4/54
		Mulvaney, J. L.	4/53
Mahalaxmi Calico Prinling Mills	13/55	Murari Enginerring Works	1/54
The,		Mysorewalla Dhoop Factory	5/54
Mahendra Silk Mills Ltd., The,	13/55	N	
Malabar Tile Works	4/54	Nadar, A.	5/54
(M/s.) Maneklal Harilal Spg. & Mfg.	13/53, 13/54	Nadar, A. C.	5/55
Co., Ltd.		Nadar, A. N. K.	5/54
Mangal Engineering Works	1/55	Nadar, K. P.	5/54
Mangalore Trading Association Ltd.	1/55	Nadar, S. P.	5/55
The		Nadar, S. P. A. D.	5/55
Marimuthu, T. P.	5/55	Nadar, V. S. V.	5/55
Matharoo Engineering Works	1/54	Nagindas Ratilal and Co.	13/54
Mathuram Beniram Ltd.	5/54	Nagpal, K. G.	4/55
Mazumder, (Sm.) K. K.	4/54	Nagpal, M. K.	13/55
Mellor, W.	4/54	Nagpal Printing Mills	13/55
Mergulhao, G.	1/55	Nagri Mills Co., Ltd., The.	13/53, 13/54, 13/55, 14/53, 14/54.
Metal Box Company of India	1/54	Narain, R.	5/55
Limited, The			
Metro Perfumery Co.	4/54, 5/54, 5/55.		

Name.	Class No. and Year.	Name.	Class No. and Year.
N—contd.		P—contd.	
Naraindas	5/55	Patent Tiffin Carrier Sangvi Co. The,	1/54
Narang Udyog Bharat	5/53	Parumal, K.	13/55
Nasiruddin	1/54	Patira, C. T.	3/53, 6/53, 12/53
National Lithographic and Printing Press	5/54	Parvi Sons & Co.	5/55
National Moulding Co., Ltd.	3/55	Patel, J. S.	13/54
Natiodal Traning Co. The	13/54, 14/54	Patel, S. B.	13/54, 14/54
Navajivan Mills Limited, The	13/54, 13/55	Paulrajan, V. G.	5/54
Nayar, U.	5/55	(M/s.) Pearl & Plastic Products	3/54
Nelson and Company	1/53, 1/54, 1/55	Perumal, M. N.	5/55
New Commercial Mills Co., Ltd., The	13/53, 13/54, 13/55, 14/53, 14/54, 14/55	(M/s.) Phoenix Mills Ltd., The	13/53, 13/54, 13/55, 14/53, 14/54, 14/55
New India Rayon Mills Company Ltd., The	13/54, 13/55 14/55	Pillai, G.	12/54
New India Thread Industries	5/54	Pillai, S.	12/54
New Jahangir Vakil Mills Co., Ltd., The	13/54	Pillai, S. S. V. G.	5/54
New Kaiser-I-Hind Spg. and Wvg. Co., Ltd., The	13/53, 14/53	Pillai, S. V.	5/55
New Mahalaxmi Silk Mills Ltd., The	13/54, 13/55	Pilot Pen Company (India) Ltd., The	1/54, 4/54
New Maneckchock Spg. & Wvg. Co., Ltd., The	13/54, 13/55	Piyaralal, M.	5/54
New National Mills Ltd., The	13/54, 13/55	Podar Textile Mills	13/54, 13/55
New Shorrock Spg. and Mfg. Co., Ltd., The	13/53, 13/54, 13/55, 14/53, 14/54, 14/55	Poogal, R. L.	5/54
New Vinod Silk Mills Ltd., The	13/53, 13/54, 13/55	Popular Buttom Works	5/55
Newton Type Foundry	1/54, 1/55	Popular Scale Company, The	1/54
Norton & Company	1/54, 1/55	Porwal Pore & Co.	1/55
O		Prakash, O.	3/54
Ogale Glass Works Limited	1/54, 5/54	Prakash Udyogalay	1/54, 1/55
Olympia Werke West G. m. b. H.	1/53, 3/53	Prasad, J. P. N.	5/53
Orient Trading Co.	1/55	Premier Chemical Industries	13/54, 13/55 14/54
P		Prest-O-Lite	3/53
P. V. S. Beedies Ltd.	5/53	Q	
Pahwa, T. R.	13/55	Qadri, Z. H.	1/55
Panalal Silk Mills Ltd.	13/54, 13/55, 14/54, 14/55	R	
Panchal, C. J.	3/53	R. Singaram Chetty	5/55
Parekh, I. B.	4/55	R. C. & Company	5/54
Parker Pen Company, The	3/55	R. M. Bidi Company	5/54
Parle Bottling Company Ltd.	4/54	R. S. Sewing Machine Co.	1/54
(M/s.) Parry and Co., Ltd.	5/53	Radhabilas Karyalaya	5/54
Patel, N. D.	1/53	Rafi, M.	1/54
		Rahman, H.	1/55
		Rahman, S. H.	1/55
		Raipur Manufacturing Co., Ltd., The,	13/54, 13/55
		Raj Corporation	5/55
		Raja Bahadur Motilal Poona Mills Ltd., The	13/54, 13/55
		Rajagopal, K. P.	5/55

Name.	Class No. and Year.	Name	Class No. and Year.
R—contd.		S—contd.	
Rajendran, K. P.	5/54	Saxena, P.	1/54
Rajagar Spg., Wvg. & Mfg. Co., Ltd.	13/53, 13/54	Schwanhauser & Co., K. G.	1/54, 3/54
Raja, R. R. G.	1/54	Sen, K. C.	3/54
Ram, B.	5/55	Seth & Co.	3/54
Ram, T.	13/55	Setty, S. C. V. R.	5/55
Ramaiah, B. V. S.	5/54	Shah, C. S.	1/53
Ramakrishna & Co.	5/55, 13/55	Shah, G. P.	3/55
Ramesh Chandra & Co.	13/54, 14/54	Shah, J. S.	1/53
Ramsaran Lal, M. P.	1/54	Shah, K. M.	13/54
Ramsingh, R.	1/54	Shah, N. W.	5/54
Ratnaseamy, D.	1/55	Shah, S. H.	14/55
Rattanchand, B.	13/54	Shah, S. M.	5/55
Rawther, A. M. A. R.	5/54	Shahani, T. K.	1/54
Ray Mahasay, T.	12/54	Sharda Dyeing & Printing Works	13/55
Rethnam, S. T.	5/55	Sharda Paper-Box Mfg. Co.	5/54, 5/55
Reliance Industries	1/54	Sharma, (Sm.) S	1/53
Reliance Trading Company	3/54	Shiv Soap Works	5/54
Renown Biscuit Company, The	12/53	Shree Krishna Limited	1/55
Robert, (Mrs.) C. K.	1/54	Shree Madhusudan Mills	13/55
Robertson Thain Limited	1/54	Shree Mohan Dyeing, Ptg. & Wvg. Mills.	13/55
Rohit Mills Ltd.	13/54	Shree Niwas Cotton Mills Ltd., The,	13/53, 13/54, 13/55, 14/54, 14/55.
Rosehall & Company	5/55	Shree Ram Mills Ltd.	13/53, 13/54 13/55
Rosner, E.	1/54, 3/54	Shree Subhlexmi Mills Co., Ltd.	13/54, 13/55
Routh, N. K.	1/54	Shree Viswakarma Industries	1/55
Row, R. S.	1/54	Shukla, B. N.	4/53
Rowther, M. N. P. M.	5/55	Shunmugan, S.	5/55
Roy, N. C.	5/54, 4/55	Sidhu, H. S.	3/55
Royal Manufacturing Co.	1/54	Silver Cotton Mills Co., Ltd., The	13/54, 13/55, 14/55.
Rudra & Co., Ltd.	1/54	Singer Manufacturing Co., The	1/54, 1/55
S		Singh, A.	3/55
S. Abdul Shakoor & Co.	5/54	Singh, B.	3/54
S. Tajbhai and Sons	1/54	Singh, G. S. T.	5/55
S. Qamaruddin & Sons	1/55	Singh, H.	5/54
S. O. Bowker Ltd.	1/55	Singh, J. N.	3/55
S. T. Sons & Co.	3/54	Singh, P.	5/54
Sadhu Charan and Company	1/54	Singh, R.	5/54
Saeed, M.	1/55	Singh, S. P.	1/54
Sahiv, K. L.	5/55	Siriya pushpam Match Works	5/55
Said, M.	1/54	Smith, (Mrs.) K. D.	11/54
Sankarakumar, L.	5/55	Smith, Stanistreet and Company Limited	4/54
Sarangpur Cotton Mfg. Co., Ltd., The	13/53, 13/54, 13/55, 14/53, 14/54.	Sobhraj, R.	5/54, 5/55
Sardar Bidi Company	5/54	Soundarapandian, A.	5/55
Sareen, B. B.	3/55	South India Corporation (Madras) Ltd.	1/53, 3/53, 4/53, 5/53, 12/53.
Sarkar, P. C.	1/55	Southern India Match Company	5/53
Sarup, R.	12/54		
Sawhney, M. C.	4/54		
Sawyer's Inc.	3/54		

Name.	Class No. and Year.	Name.	Class No. and Year.
S—contd.		U	
Sri Krishna Spg. & Wvg. Mills Ltd.	14/53, 14/54, 14/55.	Udavidas, C.	12/55
Sri Ram Textile Factory	5/54	United Fine Art Lithographers	5/55
Sreenivasan, T. M.	1/55	Upper India Trading Co., Ltd.	1/55
Srinivas Soap Factory	5/54	Usha Dyeing, Bleaching & Ptg. Mills Ltd.	13/55
Stainless Steel Agencies Ltd.,	1/55	Usha Textiles Limited	3/55
Standard Industries, The	5/54	V	
Standard Mills Co., Ltd., The	13/53, 13/54, 13/55, 14/54, 14/55.	V. Chibber & Co.	1/54, 3/54, 1/55.
Standard Rolling Shutters & Engineering Works, The,	1/55	Vaishno Calico Dyeing and Ptg. Mills	13/55
Stoot, J. W.	6/55	Varatharajan, S.	5/55
Suchdev, S. S.	3/53	Varma, K. L.	4/54
Sukkur Biscuits Mfg. Co.	5/54	Veerappan, S.	5/55
Suleman, M. M.	1/54	Victoria Glass Works Ltd.,	4/54, 4/55
Sunder, S.	5/54	Victoria Mills Ltd.	13/55, 14/55
Suri, K. L.	1/54	(M/s.) Victory Fruit Products	4/54
Surindar & Brothers	5/54	Vijay Bharat Thread Mills	5/55
Svadeshi Mills Co. Ltd., The,	13/54, 13/55	Vijaya Mills Co., Ltd., The	13/53, 13/54
Swadeshi Industries, Ltd.,	3/55, 13/55	Vikram Mills Ltd.	13/54
Swadeshi Trunk Factory	1/54	Virdi, S.	1/54
Swadeshi Type Foundry	1/53, 1/54, 1/55, 3/53, 3/54.	Vishnu Cotton Mills Ltd.	13/54, 14/54
Swamy, M. V.	3/54	Vora, K. H.	1/55
Swastik Agency, The	4/54, 4/55	Vuminidiars (M. F. R. S.) Ltd.	1/53
T		W	
T. Maneklal Mfg. Co., Ltd.	3/54	W. Smith & Co.	1/54
Taj Fresh Fruit Products Company	4/55	Wadia, (Miss) R. N.	3/55
Tapp, E. T. J.	1/54	Webbing and Belting Factory Ltd.	13/55
Tata Mills Ltd., The	13/55, 14/54	Weldon Sales Corporation	5/53, 5/55
Tehnicolor Glass Marble Mfg. Company	4/54	Willys Motors, Inc.	1/55
Telefonaktiebolaget L. [M. Eriesson	3/54	Wilson Industries	1/54
Thangarajan, A.	5/55	Woolcott, L.	3/54
Thanigachalam, V. M.	5/55	Y	
Thevar, S. M. P. M.	5/55	Yashanoff, B. A.	1/54, 1/55
(M/s.) Traders United	1/53, 1/55, 3/53, 3/55, 4/53, 4/55, 5/53, 5/55.	Young, D. H.	3/54
		Z	
		Zephyr Leather Works	6/53

List of Agents for the sale of Govt. of India Publications as on 7-12-56.

GRA—

English Book Depot, Taj Road.
Lakshmi Narain Agarwal, Hospital Road.
Modern Book Depot, 4, Taj Road.
National Book House, Jeonimandi.
Peoples' Book Centre, M. G. Road (R).
Wadhwa & Co., Raja Mandi.

HMEDABAD—

Chandra Kant Chiman Lal Vora, Gandhi Road.
Hari Har Book Depot.
New Order Book Co., Ellis Bridge.

JMER—

Book land, 663, Madar Gate.
Law Book House (R).
Rajputana Book House.

KOLA—

Bakshi, M. G.

LIGARH—

Friends' Book House, M. U. Market.

LLAHABAD—

Central Book Depot, 44, Johnstonganj.
Kitabistan, 17-A, Kamala Nehru Market.
Law Book Co., P. B. No. 4, Albert Road.
Ram Narain Lal, 1, Bank Road.
Students' Friends, 224, Hewett Road.
*Supdt., Printing & Stationery, U. P.
Universal Book Co.
University Book Agency (of Lahore) P. B. No. 63.
Wheeler & Co., S/S A. H.
Wadhwa & Co. (R).

ALWAR—

Jain Book Stores, Hope Circus.

AMBALA CANTT.—

English Book Depot.
Sohan Lal Publications.

MRITSAR—

S. Gupta, Near Arya Samaj Bazar, Pashamwala (R).
The Law Book Agency, G. T. Road, Putlighar.

ANAND—

Charter Book Stall, Station Road.

BANARAS—

Banaras Book Corporation, University Road, P.O. Lanka.
Chowkhamba Sanskrit Series Office, K-37/108, Gopal
Mandir Lane.
Kohi-Noor Stores.
Students' Friends, University Gate.

ANGALORE—

Book Emporium S/S S.S., 118, Mount Joy Road, Baawan-
gudi P.O.
*Curator, Govt. Book Depot. (Director of Ptg. Sty. & Pubs.).
Makkala Pustaka Press, Jayachamaraja Road (R).
Maruthi Book Depot (R).
Standard Book Depot, Avenue Road.
The Bangalore Press, Lake View, Mysore, P.O. Box 7.
The Bangalore Legal Practitioners Co-op. Society Ltd.
Vijayar Sahitya Ltd. Balepet.

BAKEILLY—

Agarwal Brothers, Bara Bazar (R).
Saraswati Sadan, 19, Subhas Market.

BARODA—

Good Companions.

BIHARALPUR—

Dealers Welfare Syndicate, 13, Anant Ram Lane.

BHOPAL—

Allied Traders, Motia Park.
*Supdt., State Govt. Press.

BOMBAY—

Arjan Dass Gagan Dass (Lib.), Santa-cruz Air Port.
Bhayani Bros. (R).
Charles Lambert & Co., P.B. No 1032.
Co-operators Book Depot, 9, Bake House Lane, Mahatma
Gandhi Road.

BOMBAY—contd.

Current Book House, Hornby Road.
Current Technical Literature Co., Ltd., 133, Mahatma
Gandhi Road.
D. Wamadio & Co. (R).
Elpees Agencies.
International Agencies, 195, Hornby Road (R).
International Book House Ltd., Ash Lane, Mahatma
Gandhi Road.
Indo Overseas Trading Co.
Lakhani Book Depot.
New Book Co., 188-190, Hornby Road.
P. P. H. Book-Stall.
Popular Book Depot, Lamington Road.
P. H. Rama Krishna & Sons, Shivaji Park Road, No. 5 (R).
*Supdt. Ptg. & Sty., Queens Road.
Sunder Dass Gian Chand, 163, Samuel Street.
Shreyansh Parkashan, 46/48, Champa Galli (R).
Taraporevala Sons & Co. S/S D. B.
Thacker & Co.
Tripathi & Co. S/S N. M., Princess Street.
The Kothari Book Depot, King Edward Road.
The Book Centre Ltd., Ranade Road, Dadar.
Wheeler & Co. S/S A. H., 249, Hornby Road.

CALCUTTA—

Chakravarty Chatterjee & Co., Ltd., 15, College Square.
Chatterjee & Co., 3, Bacha Ram Chatterjee Lane.
Dass Gupta & Co., Ltd., 54/3, College Street.
Eastern Trading Co., 64A, Dharamtala Street (R).
Firms K. L. Mukhopadhaya, 6/1A, Bancha Ram Akur
Lane.
Hindu Literary, 69A, Boloram De Street.
K. K. Roy (R).
Lahiri & Co., Ltd., S/S S. K.
M. C. Sarkar & Sons Ltd., 14, Bankim Chatterjee Street.
M. N. Roy Choudhury.
Newman & Co.
Orient Book Co., 9, Shyama Charan Dey Street.
Oxford Book & Sty. Co., 17, Park Street.
R. Cambrary & Co., Ltd., Kent House, P-33, Mission
Row Extn.
Sarkar & Sons Ltd., S/S S. C. 1/1/1C, College Square.
Thacker Spink & Co. (1933), Ltd.

CALICUT—

P. K. Brothers, Huzur Road.

CHANDIGARH—

Jain Law Agency, Flat No. 3, Sector No. 22.
Rama News Agency.
*Supdt. Govt. Printing & Sty., Punjab.

COCHIN—

Saraswat Corporation Ltd., Main Bazar Road.

CUTTACK—

Cuttack Law Times.
Parbhat K. Mahapatra, Chandni Chowk.
*Press Officer, Orissa Sectt.
Utkal Stores, Balni Bazar.

DEHRA DUN—

Bishen Singh (R).
Jugal Kishore & Co.
National News Agency, Paltan Bazar.

DELHI—

Aggarwal & Co. (R).
All India Educational Supply Co. (R).
Atma Ram & Sons, Kashmiri Gate.
Bawa Hritikshan Dass Bedi (Vijay General Agencies),
9-E, Sadar Thana Road, G.P.O. Box, No. 2027.
†Behri Brothers, 188, Lajpat Raj Market.
Bookwell, E-4/8, Krishna Nagar.
B. Nath & Brothers, 3808, Charkhewalan (R).
Dhawantra Medical & Law House (R).
Federal Law Book Depot, Kashmiri Gate.
Finance Budget Publishing Ltd. (R).
General Book Depot.
Imperial Publishing Co., 3, Faiz Bazar, Daryaganj.
Indian Army Book Depot, 3, Daryaganj.
J. M. Jaina & Brothers, Mori Gate.
Knowledge Emporium (R).
Metropolitan Book Co., Delhi Gate.
N. C. Kansil & Co., Delhi Gate.

*For Hindi Publications.

†(Has a branch at Khan Market in the name of Behri Sons.)

List of Agents for the sale of Govt. of India Publications as on 7-12-56—contd.

DE LHI—contd.

New Stationery House, Subzimandi.
Raja Brothers (R).
Universal Book & Sty. Co., 16, Faiz Bazar (R).
University Book House (R).
Youngman & Co. (Regd.), Egerton Road.

DHANBAD—

Indian School of Mines & Applied Geology.
Ismag Co-op. Store Ltd.

DHUBRI (ASSAM)—

The Students Library (R).

ERNAKULAM—

Bharat Stores.
Probhat Book House (R).

FEROZEPUR—

English Book Depot.

GORAKHPUR (U.P.)—

Halchal Sahitya Mandir (R).

GUNTUR—

Bharat-Book Centre.
Globe Traders.

GWALIOR—

M. B. Jain & Brothers.
Saraswati Sadan (Loyal Book Depot).
*Supdt., Ptg. & Sty. (M.B.).

HANAMKONDA—

Deccan Book Stall.

HOSHIARPUR—

Universal Book Stores.

HYDERABAD (DN.)—

*Director, Govt. Press (Publication Bureau).
Hyderabad Book Depot.
Peoples' Book House, Nizamabad Road.
Swaraj Book Depot, 1368, Lakri-ka-pul.

INDORE—

Rupayama, Rampurwala Buildings.
Shri Indore Book Depot, 33, Mahatma Gandhi Road.
Wadhwa & Co., 56, Mahatma Gandhi Road.

JAIPUR CITY—

Garg Book Co., Tripolia Bazar.
*Govt. Ptg. & Sty. Deptt., Rajasthan.
Rajasthan Pustak Mandir, Tripolia Bazar.
Vani Mandir, Sawai Mansingh Highway.

JAMMU (TAWI)—

Krishna General Stores, Raghu Nath Bazar.
Students' Stores, Raghu Nath Bazar.

JAMNAGAR—

Swadeshi Vastu Bhandar.

JAMSHEDPUR—

Amar Kitab Ghar, Diagonal Road, P.B. 78.

JODHPUR—

Chopra Brothers, Tripplia Bazar.
Dawarka Dass Rathi.
Kitab Ghar, Sojati Gate.
Mashesh Book House (R).

JUBBULPORE—

Modern Book House, Jawaharganj.

JULLUNDUR CITY—

Hazooria & Sons, Mai Hiran Gate.
International Book & News Co., G. T. Road (R).
Jain General House.
University Publishers.

KANPUR—

Advani & Co.
Sahitya Niketan.
Universal Book Stall. The Mall.

KAPASAU (RAJASTHAN)—

Namdhari Brothers (R).

KARNAL—

Malhotra & Co.

KHANDWA—

The Suresh Trading Co.

KHURJA—

Bharati Mandir, 31-C, Nai Basti.

KODARMA—

The Bhagwati Press, P.O. Thumsitelaiya.

KOLHAPUR—

Maharashtra Granth Bhandar (R).

KOTTAYAM—

The Vidyarthi Mitram Book Depot, P. B. No. 8.

KOZHIKODE—

K. P. Brothers (R).

KUMTA—

S. V. Kamat.

KURNOOL—

Fineland Agencies (Regd.).

LUCKNOW—

Balkrishna Book Co., Ltd., Hazaratganj.
British Book Depot, 84, Hazaratganj.
Law Book Agency, 29-A, Katchery Road.
Ram Advani, Hazaratganj.
Soochna Sahitya Depot, (State Book Depot, U. P.).
Universal Publishers Ltd., Plaza Bldgs.
Upper India Publishing House Ltd., Literature Palace.

LUDHIANA—

Loyall Book Depot.
Mohindra Brothers (R).

MADRAS—

Accounts Test Institute, P. O. 760, Egmore.
C. Subhiah Chetty & Co., Triplicane.
Higginbothams.
K. Krishnamurthy, Mount Road.
Presidency Book Supplies, 8, Pycrofts, Triplicane.
Simham Publishing Co.
*Supdt., Govt. Press, Mount Road.
Vardhachary & Co.

MADURAI—

E. M. Gopal Krishna Kone, North Chittra Street.
Viveka Nanda Press, 48, West Masi Street.

MANDSAUR—

Sikhwai News Agency.

MANGALORE—

U. R. Shenoy & Sons, Car Street.

MASULIPATNAM—

M. Seshachalam & Co.
Triveni Publishers.

MEERUT—

Hind Chitra Press.
Loyall Book Depot, Chhipi Tank.
Prakash Educational Stores.
Universal Book Depot.

List of Agents for the sale of Govt. of India Publications as on 7-12-56—concl'd.

MORADABAD—

National Book Depot.

MYSORE—

Chandra Stores, New Statue Circle (R).
H. Venkataramaiah & Sons, New Statue Circle.
J. Nanu Mal & Sons, Lansdown Bldgs.

NAGPUR—

New Book Depot, Modi No. 3, Sitabuldi.
*Supdt., Govt. Ptg. (M.P.).
Western Book Depot.

NAINITAL—

Consul Book Depot.

NEW DELHI—

Ajmeri Gate Paper & Sty. Mart, 1/6-B, Block Ajmeri Gate Extn.
Amrit Book Co., Connaught Circus.
Bhawnani & Sons, Connaught Place.
Central News Agency, Connaught Circus.
Empire Book Depot, 278, Aliganj Lodhi Road.
English Book Stores, 'L' Block, Connaught Circus.
Faqir Chand Marwah & Sons, Khan Market.
Hind Book House (R).
Jain Book Agency, Connaught Place.
Jayna Book Depot, Bank Street, Karol Bagh.
Luxmi Book Store (R).
Mehra Brothers, 50-G, Kalkaji.
Navug Traders, Original Road, Karol Bagh.
Oxford Book & Stationery Co., Scindia House.
Raj Book Depot, 1, Bengali Mal Market.
Ram Krishna & Sons (of Lahore), 13/13, Connaught Place.
Saraswati Book Depot, 15, Lady Hardinge Road.
Sikh Publishing House Ltd., 70/C, Connaught Place.
Suneja Book Centre, 24/90, Connaught Circus.
Taneja Book & Stationery Mart, Raisina Road.
United Book Agency, 47, Amritkaur Market, Paharganj.
Venus Sales Corpn. (R), Karol Bagh, New Delhi.

ONGOLE—

Shri D. Sreekrishnamurthy, Prop. Abhyudaya Book Circulating Co.

PALGHAT—

Shri V. K. Ramalingam, Vadakkanthara (R).

PATHANKOT—

The Krishna Book Depot.

PATIALA—

Jain & Co., Bazar Shah Nashin.
*Supdt., Bhupendra State Press.

PATNA—

Book Centre, Near B. N. College.
J. N. P. Agarwal & Co., Padri-ki-Haveli.
Lakshmi Trading Co., Padri-ki-Haveli.
Moti Lal Banarasi.
Novelty & Co. (R).
Pahuja Brothers, Rajendra Path (R).
Scientific Book Co. (R).
*Supdt., Govt. Printing, Bihar.

POONA—

Deccan Book Stall, Ferguson College Square Road.
Imperial Book Depot, 266, Main Street.
International Book Service, Deccan Gymkhana.
N. R. Bhalerao, 602, Shanwar Peth.
Raka Book Agency.

PUDUKKATTAI—

P. N. Swaminatha Sivam & Co., East Main Street.

RAIPUR—

Kasimud-Din & Sons, Gole Bazar (R).

RAJKOT—

Mohan Lal Dossabhai Shah.

RANCHI—

Ideal Book Stores, Main Road.

REWA—

*Supdt., Govt. State Emporium, V.P.

ROORKEE (U.P.)—

Cambridge Book Depot (R).

SAGAR (M.P.)—

Students Book Depot (R).

SECUNDERABAD (DN.)—

Hindustan Diary Publishers.

SHILLONG—

Chapla Book Stall (R).
*Supdt., Assam Sect. Press.

SIBSAGAR (ASSAM)—

T. Chuttya (R).

SILCHAR (ASSAM)—

Shri Nishith Sen (R).

SIMLA—

Azad Kitab Mahal, Stall No. 13.
J. Ray & Sons (India) Ltd.,
Maria Brothers, 94, The Mall (R).
Minerva Book Shop, The Mall.
New Book Depot.
*Supdt., Himachal Pradesh Govt.

SIROHI—

Milapchand Balbebutmal Haran, Kessar Road.

SONEPAT—

United Book Agency.

SRINAGAR—

The Kashmir Book Shop, Residency Road.

SURAT—

Shree Gajanan Pustakalaya, Lower, Road.

TRICHINOPOLY FORT—

Palaniappa Brothers, Teppakulam.
S/S Krishnaswami & Co., Teppakulam.

TRIVENDRUM—

International Book Depot, Main Road.
*Supdt., Govt. Press, Travancore-Cochin.

UDAIPUR—

Vidya Bhawan (R).

VELLORE—

S. Venkatasubhan, Law Booksellers.

VIJAYAWADA—

Hindustan Diary Publishers.

VIZAGAPATAM—

Book Centre, 11/97, Main Road.
Gupta Brothers, Vizla Buildings.
M. S. R. Murty & Co.

WARDHA—

Swarajya Bhandar, Bhaji Market.
Govt. of India Kitab Mahal
Queensway, Opposite India
Coffee House, New Delhi. } For local sale only.
Govt. of India Book Depot,
8, Hastings Street,
Calcutta.
High Commissioner for India } For all enquiries and
in London, India House, } orders from Europe and
Aldwych, London, W.C.2. } America.

